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THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

TERMS—FIFTY CENTS PER YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

THE CULTIVATOR has been published twenty-nine years. A NEW SERIES was commenced in 1853, and the ten volumes for 1853, 4, 5, 6, 7, 8, 9, 60, 61, and 62, can be furnished, bound and post paid, at $1.00 each—the set of 10 vols. sent per Express for $7.50.

"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

The Cultivator & Country Gentleman.

BENEFITS OF AGRICULTRAL READING.

He "who cultivates at once his mind and fields"—the farmer who conducts his pursuit with the intelligence of the man of business, with the skill derived from long practice, with the breadth of views obtained by reading and thinking—such is the ideal of the American "Country Gentleman," which, in publishing a paper under that name, we desire to hold up for the imitation of our readers. The truth is,—and it is creditable to Mr. MITCHELL's close observation of present deficiencies in American farm life, that he should have remarked it particularly, in his recent volume,*—in no other pursuit are forecast of plans, method in prosecution, a just apportionment of capital, more sure to *tell* upon the results accomplished, than in Farming; and the study of the sciences which bear upon Agricultural labor, instead of simplifying and reducing it more nearly to a mere mechanical series of processes, actually necessitates a larger practical skill in the application and direction for economical ends, of the increased knowledge thus attained. In other words, by increasing the power of your engine, you can accomplish more work, if you have the machinery to do it with: all that quickens the intellectual powers promotes success, if their aims are carried out through the medium of practical common sense; but no engine nor machinery, however well their work may be effected, can bring the cash account to a satisfactory balance, unless, pervading and guiding every operation, are found the order, the close observation, the business tact, which govern in other pursuits.

We believe that the English bankruptcy courts, when the affairs of an unsuccessful trader are brought before them, regulate their action very much in accordance with the kind of business habits he is shown to have formed; if his accounts are full, clear, and satisfactory, it is taken for granted almost, that failure has been due to circumstances or catastrophes he could not foresee. His certificate of discharge is then often presented him with many complimentary remarks; but, if his accounts are imperfect, if he has not clearly known himself whether he was running in debt or getting on well,—the judicial officers frequently administer a very pointed reprimand, and sometimes refuse the certificate entirely. Let us be thankful, for the credit of American farmers, that they are not liable to be examined by judge or jury very closely, in the keeping of their books, as to the direction of their capital, or the relative profits of their different undertakings: far too many might not receive a "first class certificate"—of business energy and tact.

When one is finding fault, however, with what goes on around him—complaining of this or that error, in omission or commission, as infecting the community—it is often convenient, if not always fair, to stop him with the question: "What are you going to do about it?"

—— Shall we answer this question—in a somewhat round-about way?

Will the reader, then, favor us by instituting a mental comparison, in the several respects above referred to—practical skill, business tact and some knowledge of scientific principles—between those farmers who *are* and those who are *not*, habitual readers of Agricultural periodicals? We are well aware that both these classes include some exceptions: that there are those who prefer to read in the chimney corner, when they should be holding the plow, or to discuss—the action of gypsum, perhaps—under the shade, when the reaper or mower ought to be at work; that there are others whose native instincts, so to speak, make up for lack of reading, and who, without ever consulting paper or book, or keeping any but the rudest of accounts, make more money than thousands of those who do both well and constantly. So some wholly self-taught men, in other departments of effort, have achieved positions beyond the reach of hundreds backed by all the culture of the schools, but no one for this reason decries education: we take the two classes—those of cultivated intelligence generally, and the uncultivated, or, among farmers, those who are careful readers of Agricultural papers, and those who are not,—and, as a whole, we shall find the preponderance of success in attaining the aims sought for, resting with the former. In many ways this truth is recognized by those who in controversy might not admit all the consequences of its correctness. Even the author of the book already referred to—the whole gist of whose advice to American farmers, is in directions in which the Agricultural papers are the most efficient of all means of promoting improvement—now and then indulges in a quiet "hit" at their contents, (because they

* MY FARM OF EDGEWOOD—pages 274 and 282.

argue that "farming pays," or because they give accounts of some high farming that *don't* pay, and so on,) and nowhere recognizes that they are great agents in inculcating, weekly or monthly, just the lessons that he is preaching once for all in his excellent volume. Now this volume will do great good among our farmers—if they read it: those who have habitually consulted and read the agricultural papers, will be likely to do so and profit accordingly—but will any others, we mean, of course, among those who *are* farmers strictly? Is it not the agricultural press which has fostered an audience, in the country, capable of appreciating such a work?

There are some very plain questions, like that of the "profits of farming," or this of the "benefits of agricultural reading,"—which it is well enough every two or three years, to bring up for general discussion. No one who has not had the sphere of observation which an agricultural editor may acquire by seeking intercouse with farmers throughout the country, can fully understand the apathy that prevails on the latter subject, among thousands of farmers, nor yet the steady and sure, but not very demonstrative progress that is going on among those other farmers who *do* read and know what they are about. If we are told that the very success of the Agricultural press, furnishes all needed evidence that its importance to the agricultural community is fully appreciated, we should most gladly acquiesce, if possiole; but subtracting from this success, that part which is due to the engravings and puzzles and tales and various "premiums" to subscribers, which have not the most remote connection with agriculture, and that other part which must be ascribed to the tastes of citizens and villagers who enjoy reading about the farms and gardens they may or may not elsewhere possess—the proportion that would be left, directly arising from the patronage of the farmer himself, would be far, very far, smaller than it ought to be.

—— Can it be increased?

The circulation of all periodicals is mainly dependent upon the efforts in their behalf put forth by their respective friends. The political papers are already urging their political associates to work up enlarged subscription lists, in order to influence the elections of 1864. The religious papers all have denominational (and some perhaps also political) supporters, who never tire in caring for their interests. The Agricultural press, being neither partizan nor denominational in its character, must appeal to those who perceive its influence for good upon the prosperity of the Agricultural community.

And it is this appeal we make for ourselves, now that a new volume will soon begin. As we stated in our last number, the times were never more propitious for such exertions. With a very little effort, generally participated in, the circulation of the Country Gentleman and The Cultivator might be doubled for 1864. Will not every reader endeavor to contribute something—by a word in season, kindly spoken,—by a pleasant day devoted to visiting his neighbors and laying the subject before them,—by enlisting his postmaster or some other influential person in our behalf—toward accomplishing this end? During the interval between now and the New-Year we hope to have evidences that the present prosperity and abundance of money among our farmers is leading them, more than ever before, to a liberal support of the literature of their calling, and thus to the farther advancement of our Agriculture, and of the strength and wealth of our country

INQUIRIES ABOUT MANURE.

Eds. Co. Gent.—I have about 40 loads of manure in one heap, and about 90 more to be carted, and I want to make all I can of it. Do you think it would *pay* to compost it with turf from roadsides, and from fence-corners, and from under trees in *old* pastures? (1.) Would turf be worth as much for composting as swamp mud that has been covered with bushes for a number of years? Please state what proportion of turf you would use, (if any,) and how mix it? (2.) I shall probably have a large quantity of manure from city stables this winter, which I want to take from the stables often (before it fire-fangs)—how shall I manage it after I get it? Would you get a good big pile of turf this fall, to mix with the manure in the winter as I cart it from the city? (3.) Is there any way that I can use leaves to advantage, besides for bedding? Would it pay to make a compost heap of them and manure (cow and hog?) (4.) I have just bought a small place rather run down, and I want to make all the manure that I possibly can. All the stock I have is one horse, and I don't want any more until I can cut my own hay, for hay is worth $22 per ton here at this time. If you can give me any hints on managing my manure so as to make the most of it, I should be very much obliged to you. F. L. C.

(1.) The answer to this question depends very much on the condition of the manure to be used. If already well rotted it need not be composted—and in any case we should prefer spreading it at once upon the soil before winter, that the rains may dissolve and carry it in among the earthy particles. Experience has proved this an excellent way, whether on grass lands or on ground to be plowed early in spring. Composting is more particularly adapted to coarse spring manure, which requires working down fine, and retaining all the enriching portions. Dry turf is an excellent absorbent; straw does well if worked in as litter while the manure is forming. (2.) The answer to this question depends very much upon the condition of the material; either succeeds well if dry and friable. If the turf has the most clay, less of it need be used. A clayey loam will answer if one-half as much as the manure is used—a light soil or a light peat should be in equal quantities with the manure. The thinner the layers of each, the more perfect will be the intermixture. (3.) If labor is scarce, the best way would be to spread it thoroughly broadcast upon the soil, as already recommended; the rains and melting snow will carry it into the top soil, where it will be absorbed and held by the greater or less amount of clay which nearly all soils contain. Unless large streams run across the surface, little or none of it will be carried away or wasted, the soil quickly absorbing it. If labor is cheap and abundant, and old turf, muck or peat can be placed in a heap where it will not freeze, as in a cellar or under a large pile of straw, it will assist in forming excellent compost-heaps during the winter. Another way would be to spread the manure on the barnyard, where the cattle can tread it hard, mixing with it, at the same time, layers of leaves and straw cut an inch or two in length—the object of cutting the straw is to allow the manure to spread readily in spring. (4.) Dry leaves would be useful in a compost-heap as an absorbent, like straw, and would have the advantage of being shorter, and consequently make fine manure sooner. They may be also used in the manner just described.

☞ Mr. Geo. C. Hitchcock of Ash Grove, New Preston, Ct., has lately disposed of his Flock of Cotswold Sheep, descended, as our readers will remember, from valuable importations made by Mr. H. in 1857. (See Advertisement.)

American Agriculture Seventy-five Years Ago.

A volume of the Agricultural Correspondence of GEO. WASHINGTON was published fifteen or sixteen years ago, containing his letters to ARTHUR YOUNG, Sir JOHN SINCLAIR, and others. It has been on our library shelves ever since its publication, and chancing to take it up the other day, we opened upon some statements that may be of interest at the present time. The change that has been effected during the three-quarters of a century now elapsed since most of these letters were written, both in the agriculture of Great Britain and in our own, is almost as marvelous as the progress effected by machinery in the other industrial arts. At the same time, the actual advancement in our acquaintance with the principles on which good husbandry rests, seems comparatively small; the improvement has been in the implements we use, and in the breeds of animals we raise, and, beyond these, in the wider diffusion of the knowledge then possessed or since acquired, and its more general application in the practice of the many.

It may first be remarked, as illustrative of the difficulty of foreseeing what are to be future channels of trade and centres of population, that Washington considered the Valley of the Potomac as "designated for the seat of the empire." Its inland navigation, more than any other, was "to connect the Atlantic States with the vast region which is populating, [even then] beyond all conception, to the westward of it." Here, at the "Federal City" (Washington,) was to arise "the grand emporium of North America." The "big ditch" of Governor Clinton, however, as it was facetiously termed by his contemporaries, proved too strong a competitor for the Potomac and the Shenandoah; and northern energy, in these later times, has turned the tide of travel and commerce, to a very large extent, out of the streams on to the dry land, where its ebb and flow can be at the pace of steam and its path the iron road.

As to the crops produced seventy-five years ago, we find "fifteen to twenty bushels of Indian corn, and from nine to twelve bushels of wheat, to the acre," named as the common yield in Maryland; the writer of this letter (which was in reply to some inquiries made by Washington,) adds that "there are instances among us of thirty bushels of wheat, on an average of years, being raised to the acre, on particularly manured and highly cultivated spots; and, from essays, it is a common opinion that good land, highly cultivated and manured, will produce from forty to fifty bushels of Indian corn to the acre." In Virginia the Indian corn crop is stated at "from ten to fifteen bushels an acre." In Bucks county, Pennsylvania, ten bushels of wheat to the acre is thought to be a fair average, for, though twenty, thirty, and even thirty-five bushels may be produced, "yet from the many casualties to which land tillage is exposed, in some seasons the best improved ground may not produce even five bushels." The average of rye, one year with another, was also ten bushels; of Indian corn and buckwheat, fifteen each; of oats, twenty. "A farm of two hundred acres will on an average support twelve head of cattle, twenty sheep, and ten hogs." We think the figures of our friends in Bucks county at the present time, would afford something of a contrast to the above, and a contrast that would show the folly of much that has been in print about "our exhausted lands here at the East." A writer from near Philadelphia says, "about eight bushels of wheat per acre, is a full allowance *for the better kind of farms* in these parts." The italics are ours.

Arthur Young writes, in one of his replies: "Is it possible that the inhabitants of a great continent not new settlers, who live only to hunt, to eat, and to drink, can carry on farming and planting as a business, and yet never calculate the profit they make by per centage on their capital? And yet this seems to be the case." And although our farmers occupy their own time more industriously than the planters of that day, the reproach is equally applicable to them now; they are cultivating the soil "as a business," and not engaged mainly in hunting and eating and drinking; but yet how many of them out of a hundred or a thousand, can accurately state the per centage of his profit upon his capital?

THOMAS JEFFERSON wrote (1793): "We can buy an acre of new land cheaper than we can manure an old one. Good husbandry with us consists in abandoning Indian corn and tobacco: tending small grain, some red clover, fallowing, and endeavoring to have, while the lands are at rest, a spontaneous cover of white clover."

In a letter to Washington, in 1796, Sir John Sinclair suggested the establishment of a Board of Agriculture or some similar institution, under the General Government, "with Societies of Agriculture in the capital of each State, to correspond with it." A reply to this letter was written by Washington, March 6th, 1797, two days after he retired from his eight years Presidency of the Union he had done so much to establish—in which he says: "I am sorry to add, that nothing *final* in Congress, has been decided respecting the institution of a National Board of Agriculture, recommended by me, at the opening of the session. * * I think it highly probable that *next* session will bring this matter to maturity."

In a letter to Arthur Young (1788) Washington writes: "I cannot help thinking that increasing and improving our breed of sheep would be one of the most profitable speculations we could undertake; * * * so persuaded am I of the practicability and advantage of it, that I have raised nearly two hundred lambs upon my farm this year. I am glad to find that you are likely to succeed in propagating the Spanish breed of sheep in England, and that the wool does not degenerate: for the multiplication of useful animals is a common blessing to mankind. I have a prospect of introducing into this country a very excellent race of animals also, by means of the liberality of the King of Spain. * * I have likewise a jack and two jennetts from Malta, of a very good size, which the Marquis de la Fayette sent me. The Spanish jack seems calculated to breed for heavy, slow draught; and the others for the saddle or lighter carriages. * * * I am convinced from the little experiments I have made with the ordinary mules, which perform as much labor, with vastly less feeding than horses, that those of a superior quality will be the best cattle we can employ for the harness; and indeed in a few years I intend to drive no other in my carriage, having appropriated for the sole purpose of breeding them, upwards of twenty of my best mares."

In the same letters from which the last two quotations are taken, we have striking instances of the modest and unassuming character of the man who had then been attracting for some years more of the world's attention than any other individual, and who writes of the details of agricultural management as though he had not also the management of public affairs upon his shoulders. In the former he speaks of "having resigned the chair of government to Mr. John Adams on Friday last," as one might mention any ordinary event of little consequence; and, in the latter, in answer to a request from Arthur Young to publish extracts from the correspondence in his Annals of Agriculture—Washington says, after expressing cordial approval of the design of the work: "On the one hand it

seems scarcely generous or proper, that any farmer, who receives benefit from the facts contained in such publications, should withhold his mite of information from the general stock. On the other hand, I am afraid it might be imputed to me as a piece of ostentation, if my name should appear in the work. * * I have endeavored in a state of tranquil retirement, to keep myself as much from the eye of the world as I possibly could. * * I wish most devoutly to glide silently and unnoticed through the remainder of life. This is my heartfelt wish; and these are my undisguised feelings. After having submitted them confidentially to you, I have such a reliance upon your prudence, as to leave it with you to do what you think, upon a full consideration of the matter, shall be wisest and best."

[For the Country Gentleman and Cultivator.]

Rotation of Crops for Dairy Districts.

Messrs. L. Tucker & Son—In a strictly dairy region of country, the production of the grass crop—pasture and meadow, is the one great subject of interest; consequently the rotation of crops, the profits of grain raising, &c., attract but little interest. If we keep our cows well, all we care to sell is our butter and cheese. If our meadows fail we plow them, taking up the parts most run out—plant corn on the sod, and seed down the next year with oats or barley, so that each year we have Indian corn and oats or barley to feed to our cows, and we buy our flour. Some dairymen, it is true, sell their coarse feed, but the dairy suffers no doubt to a certain extent.

The limited "rotation of crops" here hinted at, is about all we care to study, and a *few more cows* the constant aim and end of the dairyman's desires—cows and dollars being synonymous terms. While preparing to renew our meadows, the corn crop is certainly a valuable adjunct, and he who succeeds in getting a good one, has "struck a vein." To dairymen, the most of my experiments, however prosily told, may be of interest, and so please present through your columns the paper herewith.

I did take great interest in the manufacture of cheese; but progress, progress, is the order of the day, and we go into it now wholesale. My milk goes in with the milk of 700 cows, and comes out a factory-made article of commerce. "Our factory" has just sold at 14⅛ cents per pound.

My Corn Crop--How Managed, Results, etc.

Messrs. Editors—I will not attempt to give you an "account current" with my field of Indian corn, nor figures to show how much it has cost to cultivate it, but I have a good crop, and wish to tell how I got it; and first, the land lies handsomely facing the south, the soil good—on a tenacious clay subsoil,—not too wet, at least was not this season. We plowed early in spring eight inches deep with one of J. & G. Lord's plows, No. 60, which turned the sod very handsomely. We had constantly to remark that soil *never before disturbed* was being turned up to the surface, (we note this as one element of success.) We went over the whole with a good cultivator drag, and commenced planting on the 20th May—the land being marked each way, three feet six inches, with a heavy marker. Six years ago I got of a neighbor my seed-corn, which was then, I was told, eight-rowed yellow flint; each year since I have saved my own seed, rejecting in planting the buts and tips. I think I have improved it every year, and now it is 12 and 16-rowed, mostly the latter, and I make no vain boast when I say it is *splendid*. We did not manure before planting, but before the first hoeing we applied a liberal dressing of *prepared night-soil* on the hill. We had saved but twelve barrels of this, which did not suffice for the whole piece; and now for the result.

At the proper time, and before frost, we cut it up and put ten hills in each stook—over 1,000 in all. We are now husking it, and day after day we get a good bushel of sound ears from two stooks or twenty hills, up to the line of manuring—beyond that it takes thirty hills to fill the same bushel basket, the treatment of the crop being alike in all respects except the manure. I deodorized my night-soil with air-slacked lime, say two-thirds of a barrel, with leached ashes and common earth, in all enough to make the twelve barrels; threw it into a heap, and worked it over before using. There was nothing repulsive in the use, but during the first process the lime disengaged so much ammonia that at times it was almost suffocating, (*Mem.*, this year I use no lime in composting for next year's crop.) We cultivated and hoed twice, and raised very few weeds, but a tremendous crop of pumpkins. We get no soft corn, but with nubbins and the ears which occasionally fell to the ground and become soaked, and some tied too close under the band being mouldy, about every eleventh basket goes to the pigs.

I have not measured my crop, for it is not gathered yet, but those curious in such matters figure it at about 80 bushels to the acre as far as manured, and between 50 and 60 were not manured. We had no trouble with wire-worms, while my neighbors on each side had their crops almost ruined with them.

Looking the ground over, I conclude *deep plowing* advisable; *stable* or *hog manure* in the hill or otherwise, as used by my neighbors, objectionable, as breeding worms; *night-soil compost* valuable, without any tendency to breed worms or weeds.

I will add that this is not my first nor second trial with prepared night-soil, and I have yet to record the first failure. I am satisfied that it pays.

One word about P. J. Sherwood's system of farm accounts, current vol. Country Gent., page 251; my experience convinces me it is *impracticable*. It may be to a certain extent a good pastime, but farmers generally have something to do. A daily record of leading events is very desirable—one which should include income and outgoes, accounts with workmen, &c., but the details he recommends would occupy one man's time the season round, almost. D. "*Fisk Farm*," *Oneida Co., Oct.* 16.

[For the Country Gentleman and Cultivator.]

Management of Wet Barnyards.

Eds. Co. Gent.—I see an inquiry in the last Co. Gent. from J. McC. of Newfane, N. Y., what to do with his barnyard, which is nearly level and almost impossible to keep dry.

Having had some experience with such an one, I will tell him how we managed. Some twelve or fifteen years ago, my father thought of the idea of planking the yard with hemlock plank two inches thick. We accordingly procured enough to cover a little more than one-half of the yard, which are now nearly sound, and will probably last five or ten years longer.

The manner of laying the plank was as follows: Take good, sound, straight slabs, bed them into the ground (flat side up,) so that the upper side of the slab will be level with the top of the ground. For twelve feet plank we

use three stringers, and for 16 feet use four. They are then ready to receive the plank, which will need no nailing or fastening, unless they may happen to come near a driveway, or something like that.

Should Mr. C. plank his yard, he will not only find it dry, but very convenient about getting out manure, which alone would nearly pay for the expense of planking.

Chenango Co., N. Y. M. E. MERCHANT.

[For the Cultivator and Country Gentleman]

IMPROVEMENT OF SOIL BY CHARRING.

One of the most permanent and paying improvements that can be made to a garden, in which the soil is heavy and cloddy, although well drained, is effected by collecting chips, brush, stalks, and other vegetable matter, and, during the dry weather of autumn, charring it into coal. The heat of this coaling will also clear a quantity of sod and the sod itself, and all the coaled matter thus produced, will remain for ages light and friable, easy and safe to work in wet or dry weather.

Another advantage resulting from this simple process of amendment, is that the light-colored clay becomes dark, absorbing heat, and advancing plants fully two weeks earlier than the un-ameliorated soil.

Another important advantage is that the charring destroys from the soil, for the season, all the minute, predaceous, scarcely suspected, insects which destroy so large a proportion of our cultivated crops. The seeds and roots of weeds are also effectively destroyed.

Another is that the mellowed earth never compacts with rains, and the needed air is constantly admitted, without a constant necessity for hoeing.

The carbonized matter at the open surface, absorbs the gases which nutrify plants, much more freely than the unporous clay, and the rains carry down to the roots rich supplies of carbonic acid and ammonia; these impart the luxuriance of color and the rich foliage which always follow the use of a charred dressing. Vegetables are more tender and succulent, and sweeter. A handful of charred stuff applied over a clump of flowers, bulbs, or bedding plants, brings out color and growth "like a charm."

Some soils are not benefitted. Perhaps in some cases unfavorable chemical changes are induced by the heat; in others, favorable ones. So far as texture of soil is concerned, a ready test of the adaptation of the process is made by putting a handful of the soil into a small pot or pan which can be covered closely, and placing it in a fire until charred through. It will surprise many a one who has never made the experiment, to find a lump of tough, clayey subsoil, apparently devoid of vegetable matter, after a short roasting changed in color to nearly black, and so permanently friable that a mire or paste cannot be made out of it.

The process of charring requires more of time and watchfulness than of skill. If the fire passes into the heat of flame, it will consume the coal and leave nothing but valueless brick-red earth, and a little ashes. Some other job should be on hand within view of the charring-pit, so that a constant eye can be kept on it for a day or two.

The material should be dry enough to burn readily; brush should be cut or broken up, so that it can be packed closely for burning. A shallow trench about two feet wide, and as long as may be necessary, is prepared, and sods are dug or plowed up alongside, and exposed to the sun to dry. When ready to burn, the brush, chips, &c., are packed in closely to a height of about two feet, leaving openings to the bottom at every three or four feet, to admit of firing it near the bottom and middle of the pile. Sods are laid over the heap, leaving only openings for draught. Set the fire early in the morning. As the flame breaks out, it is checked and stopped by applying other sods and clay, and the fire is drawn towards unburnt parts of the pile, by making openings there for draught. When all is charred, the heap may be pulled apart to cool, and unburnt sticks can be heaped together with some coals, and covered until charred.

Keep the material thus prepared, for use in the spring as a surface dressing. W. G. WARING.

Center Co., Pa., Oct. 1863.

FOUL IN THE FOOT.

A New-Jersey subscriber asks a remedy for "foul in the foot"—having exhausted all within his reach without effect.

I am using for foot rot in sheep—my flock being badly affected with that disease this season—a composition composed of,

Corrosive sublimate	2 drs.
Venice turpentine	1 oz.
Lard	1 lb.

Dissolve the corrosive sublimate in half a tea-cup of warm water, and incorporate this solution and the turpentine with the lard cold—clean the part affected and apply this paste. It is a powerful remedy for foot rot, and from close resemblance of the disease, would seem worthy of trial, all other things having failed, for foul in the foot. It is a poison, and should be carefuliy handled.

A MARYLAND FARMER.

HOW I RAISE MY FALL PIGS.

I always try to have them farrowed in the fore part of September, and when three or four weeks old put the sow and pigs in with my fatting hogs; where they have for the first month, plenty of boiled potatoes, pumpkins, &c., with meal, and then finish off with a month or more of corn; care being taken to have plenty of yard-room, so there will be no fear of the small ones getting hurt. Also have a place where the little ones can go by themselves and get a drink of milk at their leisure, as I find they are very thirsty in their habits. We usually allow them to run with the mother in this way until they are from eight to ten weeks old, when they will ordinarily be in a good thriving condition for winter, as I find a late poor pig is poor property in December.

Salisbnry. Conn. W. J. PETTEE.

POULTRY POISONED.

EDS. CO. GENT.—I have no remembrance of having seen or heard of the diseased potato, or potato rot, injuring any beast or fowl until recently, when in a flock of forty, old and young, thirty died. Probably about all that ate the rot, were attacked and died within thirty-six hours, on this ranch

Symptoms.—Closing of the eyes, rush of blood to the head, which they cannot hold up, nor stand erect.

We commenced various experiments upon them without any good results. At the last we raised two out of three that appeared as bad as the others, by giving them doses of soda in lumps the size of a pea, and water, with an occasional feed of soft sour dough or yeast. They began to amend the third day. Have recently heard of another person near Los Angeles, losing his birds, by feeding on bad potatoes.

Saleratus or soda is an antidote to poison. In this country horses are often bitten by snakes. By pouring down saleratus water freely, the animal is cured. In the case of the poultry, the yeast fed them, I think, was an assistant to recover. S. W. JEWETT. *Rio Bravo Ranch, Cal.*

Protecting the Peach Crop from Winter.

We have on former occasions expressed the opinion that peaches may be had, with some labor, every year throughout the Northern States. A few experiments have been made in different places, and the result has been more or less successful. A question is as to the easiest and best method of protection. Several have recommended training trees low, bending down the branches and covering them with earth in the same way that raspberries are commonly protected. An objection to this mode is that the rigidity of the peach limbs prevent them from lying flat on the ground; and another is, the liability of the buds to become water-soaked and rot unless the earth covering is removed the very day the frost leaves it—especially if the soil be strong or heavy. We tried a few experiments last winter, a statement of which may be interesting to those having the same object before them. The winter was favorable to such experiments—in other words, it killed every exposed fruit bud on the peach in the neighborhood—not a solitary one was seen that had escaped. One set of experiments consisted in drawing a bundle of the shoots together up on the tree, and covering with moss wrapped in paper or sacking; an inch or more of fine moss was thus placed around the shoots, but it failed to afford the desired protection—all the buds were destroyed by the cold. Perhaps a casing of oil-cloth, to shut out the rain and keep the moss perfectly dry, would have succeeded better. The object was to obviate the necessity of bending down the shoots, and large portions of the tree might thus be secured with but little labor. The substitution of evergreen leaves for the moss would unquestionably have been an improvement, had they been at hand. Another trial was made by bending down the low branches nearly to the earth while they were growing the previous summer, and covering these with bundles of corn-fodder. A single bundle, or a single thickness was found insufficient to keep out the cold, and did not succeed; but two or more thicknesses afforded ample protection. Their branches were loaded with blossoms, and have now crops of fruit. Some of the trees were encased in small stacks of corn-fodder, but the workmen, performing the experiment in the absence of the owner, did the work quite imperfectly, leaving large openings through which the cold air swept. Only a few of the buds were consequently saved. There is no doubt that this mode of protecting the peach crop, would be an easy and efficient one for farmers who raise corn. The peach orchard should be adjoining the cattle-yard, and kept clear of grass and weeds so as not to invite mice. The fodder should be drawn early in winter, and neatly stacked about the trees, which for this object should be kept pruned in compact form. After the season of severest weather has passed, (which varies in different localities, but which is usually after the lapse of about two-thirds of the winter,) the fodder may be taken away from the trees and fed to the cattle. Every farmer who raises much corn, may thus protect a dozen or two of trees with no additional labor.

In regions where evergreen trees are abundant, the protection of evergreen boughs, whether it be by covering the prostrate limbs, or by encasing the shoots higher on the tree, would be neater and doubtless more efficient. J. Battey of Keeseville, N. Y., states that he has been entirely successful by using an evergreen covering of only a few inches, although the thermometer in that region often goes down to 30 degrees below zero. He found no difficulty in obtaining peaches every year. The only question was the economy of the experiment—which we hope will be tested by some of our enterprising fruit-raisers in cold regions.

APPLE TREE SHAKER.

Any one who has made a business of climbing and shaking apples, or of poling them off, knows that it is no very funny job. I used an arrangement last year, and some this, that I think is ahead of either. It is simply a hook on the end of a pole, with which you can stand on the ground and reach into any part of the tree, and do better execution than you could to shake or pole them off. I would not recommend this for all kinds, but for hog and cider apples. W. E. M.

[For the Country Gentleman and Cultivator.]

FENCES--ORCHARD GRASS.

Your correspondent S., asks for "a strong portable fence, easily put up and taken down, and strong enough to enclose cattle and sheep, that will not cost too much." Good, straight chestnut fence rails, put up in the worm or zig-zag form, will meet these requirements fully and satisfactorily. The fence will cost about a dollar per rod. When dry the rails are light, easily handled, quickly put up and taken down, and will last a life time. If the man lives twenty years, the cost to him, including interest on first outlay, will be only 12 cents per rod per year. Credit the fence with its use and the cost is nothing, with it still on hand and sound.

I fully agree with a Kentucky correspondent as to the value, or rather want of value, of orchard grass; while the stems are hard and harsh as he describes, the blades are soft and flabby, rendering it totally unfit for hay. Its only recommendation, as he states, is for early pasture, but with all the drawbacks he sets forth. This opinion is founded upon twenty five years' experience and observation. A Maryland Farmer. *October* 20, 1863.

[For the Country Gentleman and Cultivator.]

A SUGGESTION IN COOKING FEED.

How to get a good cover for Mott's agricultural boiler—buy a good tight molasses hogshead; saw the bottom off, say 18 inches from the head, very true and even; saw a circular hole in the bottom ten inches in diameter, dishing, so that the piece taken out will do for a cover. When you use your boiler, fill it even full of potatoes or whatever you wish to cook; put on the cover, and fill the top full through the trap-door, and if the hogshead is of the right size and fits well on to the top of kettle, so that but little if any steam escapes, you will find a great saving in fuel, as you can both cook one-third more, and do it with very much less fuel, than without any cover or only a loose one. My own is a two-barrel kettle, and can cook it full of potatoes and pumpkins in two hours, with one very large handfull of seasoned wood. It is all important, however, that the apparatus should be well fitting, so as to preserve all the steam. W. J. Pettee.

Salisbury, Conn.

Whatever you cultivate, says an English exchange, let it be of the best kind. A few choice, well-grown plants, whether in the borders, conservatory, or greenhouse, will afford more enjoyment than a mass of ill-selected varieties crowded together without taste or judgment.

S. W. Hall and his "Yankee Farmer."

Eds. Co. Gent.—I had the pleasure some time since, of calling on your correspondent, S. W. Hall of Elmira, and as I was much interested in some of his farm operations, and farm implements, I have thought of "jotting down" for the benefit of your readers, some of the impressions that I received. Mr. Hall's farm is one of the finest in that section of the State, all of it, I believe, intervale land, easily tilled, and within a stone's throw, almost, of the thriving and beautiful village of Elmira, and altogether a very desirable place for the home of an intelligent farmer. I found Mr. Hall busily engaged in pruning a beautiful pear orchard of one thousand trees, not yet in full bearing; and the thorough culture and care it had received, convinced me at once that he did not belong to the "slip-shod" class of farmers, but one of those thorough, intelligent workers who are the pride of our profession, and public benefactors to the community in which they dwell. I say benefactor, for the reason that *very* dull men can hardly help being benefitted by a living example of thriving, intelligent industry in their very midst. Mr. Hall prides himself I think, and it is a laudable pride, on not only *seeing* and *directing* the labors of his farm, but with his own hands *doing* what can be done by himself better than by another, thus setting an example of industry, not only to his hired laborers, but to every man in the community desirous of success and willing to labor therefor.

From Mr. Hall's description of the farm as it came into his possession a few years since, and its present appearance, I could easily see that he had been systematically at work, digging, manuring and grading those long neglected acres, until they had become eminently beautiful and productive, and sure to yield a rich reward for all the care and labor bestowed upon them. Adjoining the pear orchard was the somewhat famous "carrot patch," over which there has been considerable discussion in the columns of the Co. Gent. It was too early in the season for me to judge of the crop by the actual show of roots; but the thorough culture witnessed gave good evidence that the autumn would bring a bounteous harvest. The long, straight rows were graded and sown by his "Yankee Farmer," but it seemed to me that a score or so of professional gardeners had been at work for a long time, with spade and rake and line, to form such evenly graded rows and so nicely fit the soil for the young and tender plant. Scarcely a weed could be found in the whole field—some five or six acres. Not many of our farmers' gardens would at all compare with Mr. Hall's carrot field, in neatness, taste, and good cultivation.

The culture of all root crops in rows entirely by hand, as far as my experience goes, is a very tedious affair. From early boyhood I have some recollection of this kind not at all agreeable. But here Mr. Hall almost entirely dispenses with hand labor, and raises his crop of valuable roots much cheaper than by hand, and with greater neatness and dispatch. The cornfield, fitted, planted and tilled by the same implement, was also visited; and here I saw the same uniformity of work, the same nicely graded rows that I had previously seen and admired in the carrot field. I had not yet seen the implement at work, and could hardly rid myself of the idea that the hand had had something to do with the neatness and regularity that I everywhere saw. But on an adjoining farm Mr. Hall had hired and planted a large field with potatoes, and to this we repaired in order to see the "Yankee Farmer" at work. The field had been ridged and planted by this implement, and it was now cultivating or hoeing them, and hoeing them WELL. The nicely adjusted knives were cutting up the weeds and stirring the soil close up to the young plants, and leaving the soil where it passed as mellow as an "ash heap." This field was full of that troublesome "quack grass," but wherever the polished knives of the "Yankee Farmer" went, the quack made but a sorry resistance, for it was cut up, dug up and left to wither in the sun. With the machine once started on its track away it went, unguided by the driver's hand, *very seldom* disturbing a young potato plant, although it dug up the earth and eradicated the weeds in *very* close proximity to them. It was *tilling* the *soil* BETTER than I had *ever seen it done* by hand in *large fields*.

Mr. Hall exhibited his Yankee Farmer last year at the State Fair, and if my memory serves me right, it received but little commendation; nor do I believe such an implement can be judged correctly, only as it is tested in the field. When not in use it strikes the observer a rather a cumbersome affair, and not very easily managed. I do not wish to influence any one to purchase or use this implement, as I have no interest in its sale or manufacture; still, in writing of what I saw, I wish to record my own impressions correctly. To sum up in a few words, I would say, that for all crops planted on ridges and in drills, this machine I believe to be a valuable one; provided first, that the fields are of *good size*, as quite a space must be left at each end for turning upon, and secondly, that the land to be tilled be very free from *stumps* and *stones*. These conditions are indispensable. Whether it is policy to cultivate most of the hoed crops of the farm in this way, is a question that I am not prepared to answer.

From the potato field we went to the barns and other out-buildings, and last, though not least, to the manure heaps, where all the refuse of a large village that can be picked up and carted away, is composted and made serviceable for the growing crops. He keeps one team principally employed in this way. Bones, the refuse of the butchers' shops, dead animals, &c., are here made of great permanent value to the farm, as well as present profit to the owner. Nor are the droppings of his own cattle suffered to waste away in exposed places—every thing of this kind is saved as the miser saves money. Mr. Hall uses large quantities of spent tan bark as an absorbent in his stables, thoroughly drying before using, and expressed himself highly pleased with the results. Many farmers are so situated that they might be largely benefitted by his experience in this direction, would he give it publicity in the columns of the Country Gentleman.

I have written at greater length than I intended, but in connection with this are two thoughts that I wish to enforce. One is this: the change that a few years of energetic, intelligent toil can effect in a worn-out, badly used farm, is truly wonderful. The difference between a *productive* and an *unproductive* farm, is just the difference between *gain* and *loss;* one *pays*, the other does *not pay*. The other is, that in this age of mechanical improvement, it will not do for the farmer to shut his eyes and continue to toil on in the old ways of manual labor. It is the glory of our age that the sinews of the agriculturist have been vastly relieved by the cunning hand of inventive genius, and he who continues to travel on in the old way, unmindful of this, will find himself travelling *away* from *home*. Cheap tillage and good crops are pretty sure to make farming pay. Good tools will materially assist in accomplishing the first, and a plenty of good manure, properly applied, will make the farmer's harvest an abundant one.

J. E. Sherman.

How to Pay the National Debt.—J. Harris states in his address before the Monroe County Agricultural Society, that there are 163,000,000 acres of land under cultivation in the United States, and that if we should increase the products of our farms only one dollar per acre, this alone would very soon pay off our national debt. This proposed increase will seem to be a very moderate one, and entirely within the bounds of easy attainment, when it is remembered that our best farmers obtain from their land at least double the average product with much more than double the average net profit. This improvement they generally reach by adopting the best modern systems of management, and availing themselves of the suggestions of agricultural papers.

THE COST OF MAKING CHEESE.

Mr. X. A. Willard, in an article in the Transactions of the State Agricultural Society, a pamphlet copy of which he sends us,—contrasts the cost of cheese making at home and in the factories, as follows:—

Cost of Manufacturing Cheese in Families, etc.—In order to compare the two systems understandingly, it will be well to make an estimate of the actual cost of manufacturing cheese after the ordinary methods, say from a dairy of forty cows, together with the care and marketing of the same. We estimate from the point when the milk is in the vats:

Original cost of cheese house, including tables, &c,	$410.00
Vats and heater,	50.00
Press, hoops, curd knife and other utensils,	40.00
	$500.00
Annual interest on original outlay	$35 00
Dairy maid, say half time for nine months, including board	60.00
Man's time about the dairy, turning cheese, &c., &c., say average of one hour each day for nine months—twenty-five days at $1,	25.00
Annual cost of fuel, and its preparation for vats and curing room	15.00
Man's time, boxing and marketing cheese, including team, say two days per month—eighteen days at $1.50,	27.00
Annual wear and tear of dairy utensils, and keeping buildings, &c., in repair,	15.00
	$177.00

Forty cows, averaging 500 lbs. cheese per cow, gross amount	20,000 pounds.
Cost per pound for manufacturing, nearly	9 mills.
Thirty cows, 15,000 pounds, say,	11 do.
Twenty cows, 10,000 pounds,	17 do.

It will be seen then, that the cost of barely manufacturing cheese in single dairies will average a little more than one cent per pound, and this sum, for the most part, is the actual cost in cash paid out, for we have not taken into account the general supervision and care necessary in the manufacture and curing of cheese, which cannot be entrusted to domestics, but must daily occupy the time and attention of the proprietor or some portion of his family, who have something beyond mere wages to stimulate to action. And here it may be proper to observe that one of the inconveniences which is widely felt among dairymen, results in the difficulty of obtaining careful and reliable hands for the management of the dairy. If it is desired to make a first class article, cheese that will command in market the highest price, all the operations of manufacture must be performed by tried and skillful hands—hands that can rarely be obtained for hire, and when obtained, commanding comparatively large wages.

Now as cheese making is an art which must be learned like other trades, and as most of its operations are performed by females, the dairy farmer may be said to have for the most part, nothing but apprentices in his employ, since, when his dairy maid has been carefully taught the trade, she marries, and is at once lost to the laboring community.

Cost of Manufacture by the Factory.—The cost of manufacturing cheese is to the farmer one cent per pound; rennet, salt, bandage, annatto and boxes, as well as the carting of cheese to market, being charged to the association and paid by each dairyman in proportion to the quantity of milk furnished during the season. The whey, as has been before observed, belongs to the factory.

All other expenses, including the care of the cheese while curing, &c., is paid by the manufacturer.

To run a factory using the milk of 600 cows will give constant employment to at least four persons, half or more of whom may be females.

At one of the factories near Rome, N. Y., in 1862, the price paid for the services of a man and woman, who were foremen of the establishment, was one dollar each per day and board; others received from two dollars to four dollars per week; and I was informed that the actual cost of manufacturing the milk of 600 cows for the season was $700. It is presumed that this sum did not cover interest on capital invested for buildings and fixtures, but was the amount paid out for labor, board, fuel, &c.

From these data it will be easily estimated what amount of money can be realized from the business of manufacturing. Allowing that the 600 cows produced on an average 400 pounds of cheese each, there will be in the aggregate 240,000 pounds. The cost of a well constructed factory will not be far from $3,000.

We have then 240,000 pounds, at 1 cent,		$2,400
Cost of running factory,	$700	
Interest on buildings, &c.,	210	
Annual wear and tear, or depreciation of property,	200	
		1,110
Profits,		$1,290

Now, for 300 cows, nearly the same expense would be incurred, and the factory account would stand thus:

120,000 pounds cheese, at 1 cent,		$1,200
Expenses of running factory,	$700	
Interest on capital invested,	210	
Annual depreciation of buildings, fixtures, &c.,	200	
		1,110
Profits,		$90

We do not pretend to give the exact figures in the above estimates, but it will be seen that a factory manufacturing the milk of a less number than 300 cows will not be a very paying business, unless the manufacturer can have most of the work performed by members of his own family.

Those desirous of farther information on the process of cheese making adopted in the factories, and other details, will find an article on the subject in the Annual Register of Rural Affairs for 1864, just out.

ONION CULTURE.

Eds. Co. Gent.—I have frequently noticed in the Co. Gent. inquiries in relation to cultivating onions; in the last number is one for some work upon the subject. I send you by this mail an article originally published in the Transactions of the Queens County Society for 1862, founded upon my experience in the business.

In pursuing the method advised in that article we have raised and secured in good order, 7,000 bushels from 11 acres the past season, which may be considered a tolerably fair test of its correctness, especially as the season has not, in all respects, been favorable.

The production of onions is rapidly increasing in Queens Co.; five years ago 500 bushels would have covered the whole crop of this town, (Oyster Bay,) this year it will fall little short of 10,000 barrels.

Matinecock, Oct. 26, 1863. DANIEL K. YOUNGS.

A Premium Essay, on the Culture and Treatment of Onions.

It is proposed in treating this subject to confine the remarks principally to those most cultivated for the market—such as will stand a sea voyage, rather than those which are raised exclusively for local consumption, although in many respects, indeed most, they will apply equally to all.

Varieties.—It seems not to be well understood, or if so, but little heeded, that to cultivate Onions successfully, care must be taken to keep the different varieties separate, and that even more attention should be given to difference of shape than color; particularly will this apply to red onions, of which there are three distinct varieties, ripening at such different periods as renders a mixed cultivation next to impossible. The first and earliest are flat or cracker shaped, concave at the stem, known as Cracker Onions, will grow to maturity ten days sooner than the next or second early; these are deeper than the first, with a slight indentation around the stem, and ripen about two weeks before the last, or Late Onions, which are globe shaped, and of a deep red color, are the best for keeping, have stronger tops for bunching, and should be raised in preference where an early crop is not desired.

Seed.—To secure pure seed of these kinds, or indeed of any other, great care must be taken in selecting the bulbs for planting. This is best done by going over the beds and gathering such as have ripened at the same time, with the tops well down and yellow, immediately before the crop is pulled. Spread these on the ground for a few

days till the top is dry, when they should be stored not more than a foot thick, in a dry airy place. When the weather becomes cold or when first frozen, cover with any dry litter and exclude a draft of air. Before planting cut off the tops even with the bulbs, that the new shoots may come up straight in the rows. Plant the different kinds at such distances apart as shall insure against mixing when in blossom, (100 yards is quite near enough.) Select a reasonably moist soil, and give a liberal covering of such short manure as is at hand, plow to the depth of eight inches, thoroughly harrow, bush, and rake smooth. Mark off for rows three feet apart, stretch a line and trench with a hoe three inches deep, set the bulbs six inches distant in the trench, and cover, leaving the ground nearly level. The trenching may be done with a small plow, but not as well or as neatly. Use for working, a cultivator, or any implement that turns but little furrow, until the seed-top runs up, then turn a good furrow to the row, and leave it well rounded; this will prevent, to some extent, the tops lopping about and breaking with the wind. Late cabbage or turnips may be planted between the rows after the last plowing.

When the seed vessels begin to open, and before much loss occurs, cut off the heads with about an inch of the stalk, and carefully deposit in tight baskets, where it should not be allowed to remain long, as it will heat in ten or twelve hours. Spread as soon as convenient, in a single layer, on lath or net frames, exposed to a free circulation of air; leave in this situation until the whole head becomes brittle, so that it will readily rub in pieces between the hands, say six or eight weeks; during this time much of the seed will fall out; this is considered the best, and may be collected and kept by itself. Collect the heads on a tight floor, and rub or thresh till all the seeds are detached, and clean with a grain fan, or what is more effectual, immerse in a tub of water, when all the good seed will sink and the chaff may be poured off; it must then be dried by spreading in the sun, with as little delay as possible, to prevent sprouting, which may occur in the course of two hours. Before the general planting the seed should be tested by planting a few in a hot-bed, or if in much haste, tie up a small quantity in a piece of muslin and place it in a vessel of boiling water, in a few minutes all the good seed will be found sprouted.

Seed Beds—Planting.—Onions may be grown from seed on most soils, from a light sand to a heavy loam, but an easy working sandy loam, such as is not likely to bake, and free from stones is most desirable; in order to insure a full crop the first year, it should have been well manured and kept clean for one or two previous seasons.

Spread liberally, with short fresh manure in the fall, or well rotted in spring; of course the kind and quantity, must, in a great measure, be determined by circumstances. I would give horse-stable manure the preference (we use it at Matinecock, Queens County, almost exclusively, at a cost on the land of sixty-five cents for fourteen bushels, the New York cart load, and about one hundred loads to the acre,) but any manure on the farm if applied in a proper state, will produce good results, as will guano, fish, ashes, or plaster, but with the exception of fish, I would advise these to be used in addition to other manures, say 250 to 300 lbs. of guano to the acre, sown before harrowing, or carefully between the rows after the first hoeing. As the roots will penetrate to the depth of fourteen inches or more, the subsoil plow should be used, but the manure should be mixed as thoroughly as possible with about five inches of the surface soil.

As it is highly desirable to plant early, plow as soon as the state of the ground will permit, and harrow thoroughly use a bush harrow to break the lumps and smooth the harrow marks, lay off in beds twenty-five yards wide and *rake even and fine*—this last is very important.

If the object is to raise only barrel or bushel onions, the beds should be marked for rows thirteen inches apart, with any instrument at hand; a rude and cheap but convenient marker is made of pine plank two by three inches with pins six inches long inserted thirteen inches apart, the same as harrow teeth, with a tongue five feet long to draw by, so attached as to hold the teeth perpendicular when raised to the position it would naturally be held in drawing; draw this by a line the first time and then let one outside tooth follow in the last mark; if it should become slightly crooked, straighten by the line as at first. This applies only to drills, planting one row at a time; for this purpose four pounds of seed (or about ten seeds to the foot) will be sufficient for an acre, and may be planted with any good brush drill that will deposit and cover about half an inch below the surface. This should be followed with a light garden roller to leave the surface as even as possible for the first hoeing.

As soon as the rows can be traced, work out with a shuffle-hoe, and commence weeding a few days after, or as soon as any can be found in the rows. To keep the beds at all times clean, which is by far the cheapest and best way, this should be repeated about every ten days, till the tops begin to fall, which will require one tolerably active man to a moderately weedy acre.

For bunching, from six to eight pounds of seed, according to strength of soil, is required, usually six pounds is enough. These should be planted in hills for various reasons: less hand weeding will be required, the size will be better graded for bunching, will bottom with more certainty, and mature a little earlier. For this work the Bristol (Rhode Island) drill is a good machine, planting two rows at a time, one foot apart and six inches between the hills. The number of seeds to the hill will vary from five to fifteen. None but the most careful and observing hand should be selected to run this or any other drill.

For working, a very light, narrow drag hoe should be used, hung so as just to shave the surface; with this an expert workman will keep two acres clear without overworking.

When a large business is attempted, the three kinds should be planted in the proportion of one acre first early, two acres second early, five acres of late. As the first early have weak tops, they should be pulled before any of them become dried, about as soon as they have fallen and slightly yellowed. Three or four days of good weather will be sufficient to cure the tops; they should then be cut and thrown in heaps of about half a bushel, and allowed to remain two or three days, or until the top is well dried, before housing. By this time the second early will have sufficiently matured, and as they in a measure have the same defect of top as the first, they require about the same treatment. If planted in the proportion and quantity suggested, with the ordinary number of hands, say seven or eight, the late ones will now be ready, when the pulling must keep pace with the ripening, but these having strong tops will not require the nice care of the others, as they may be allowed to remain longer without topping and in the heaps, if not convenient to house immediately; but success in keeping, provided proper buildings are prepared for storing, depends upon pulling at the right time; never wait for a growth after the tops fall and yellow; there is danger of starting new roots, which is fatal to the crop. Allow them to remain exposed to the sun only as long as is necessary to dry that portion of the top remaining with the bulb, or the color will be injured. Cut at least two and a half inches from the bulb, or just below the junction of the leaves, and leave in heaps till the stems are soft and dry; turn the heaps after the dew is off in the morning, pick out all large enough for barreling, reject the hard necked ones, and house before the dew begins to fall.

On pulling let each workman take six rows, pull three at a time, laying the bulbs evenly where the middle one is taken out, with the tops straight towards or across the right hand row; when across the bed, turn to the left and take the remaining three, and lay as before; this will leave a space between the rows of bulbs the width of three rows, or about three feet for the heaps when cut. Cut in the same direction, with the left hand always to the bulb, and cast immediately in heaps about two yards distant, and finish up each round; in this way six rows will make one row of heaps, with the space for depositing

them always clear of tops, and the work greatly facilitated; for a left handed workman reverse the whole thing.

When the crop is larger than can be readily marketed from the field, or when it is desired to hold late in the season, a building should be prepared expressly for the purpose; the usual resort for storing a surplus, the barn floor, stable, wagon house, corn-crib, &c., &c., will serve for a small quantity spread thin, but a quantity that will not admit of spreading, cannot be secured in them with any kind of certainty, except certainty of loss. This is bought knowledge dearly paid for.

ONIONS FOR SETTING KNOWN IN THE MARKET AS RARE-RIPES.—In bunching there will be some rejected that are too small; these may be kept for early sets or rare-ripes—spread a few inches thick as they are not apt to keep well in bulk before cold weather. Plant early with the ground prepared the same as for raising seed, in rows fourteen inches apart, stick them in the row with the thumb and finger, right side up, one and a half or two inches between and cover slightly; this method is much better than the more common one, of strewing them carelessly in drills or furrows, and in the end saves labor. The most of them will throw up seed tops which must be cut or pinched off, close down to the leaves as soon as the *bulge shows distinctly* and not before, or another will sprout up in its place requiring a second operation, will be less likely to bottom, and eventually have a hard stiff neck; but little labor of hoeing and weeding is required, as the tops will be well up before the weeds get a start—the topping is a wet dirty job—as all will not show the bulge at once the beds must be looked over three or four times, the last about ten days before pulling, when all may be taken off; the crop when marketed is very apt to come in competition with Bermuda onions which makes it less profitable than formerly. A fair produce is about four hundred bushels to the acre.

The onion louse, a small yellow insect, sometimes causes much injury, appearing in great numbers in dry weather when the tops are well grown, eating the outer covering of the leaf. Probably the first notice we have of their presence is the change of color in the top from a glossy to a dull green, which will progress rapidly to brown, especially if the weather is hot, till the top withers without falling. As they are apt to attack setts, seed, and potatoe onions first, it is advisable not to have the seed-beds adjoining or so near that the insects may pass to them when the early crops are harvested. Plaster sown over the beds when the dew is on is believed to be a partial remedy.

At the second hoeing of seed-beeds, carrots may be placed at intervals of 18 inches between hills in every third row of onions, without apparent injury to the onion crop. The planting may be done rapidly in mellow ground by taking a pinch of seed from a cup carried in the left hand, between the thumb and finger of the right, which is slightly pressed in the earth, at the same time allowing a small quantity of seed to escape and cover with the knuckles. One pinch is sufficient for five hills. More care will, of course, be required in the next hoeing and in gathering the onions. The carrots will not require thinning as from three to thirteen will grow very well in a hill when planted at this distance. I have known a crop of 600 bushels onions and 600 bushels carrots grown on the same acre, the past season, planted in this way.

Blight or blast, a withering of the tops as if exposed to scorching heat, first appears as a black mold or smut on the leaves, sometimes in small spots as large as a dime; at others on most of the leaf, and is liable to occur at any stage of growth, as early as April, on sets, at the time the bulbs begin to form on seed-beds, and on the seed stalk when in blossom, where it is most conspicuous, causing immediate decay as far as the smut extends; at first turning to a pale green, then yellow and eventually decay. Whether this smut is the result of disease, excess of moisture in the plant, or external influences, I have not been able to determine, and it would not be noticed here except for the purpose of calling attention to the fact, which appears not to be generally known, that the mold or smut always precedes the withering, and that decay extends no further than the space covered, except the stalk is girdled with it; then of course it will rot off and fall. This may form a link in investigating the subject to its source, and possible remedy which is very desirable.

RECAPITULATION.—Be sure and have the right kinds—raise your own seed. Work the soil deep. Give plenty of well rotted manure. Plant early. Keep clean. Pull when you think they may possibly grow a little more and always before October, however green. House in dry weather, keep dry, and well aired. Avoid bruising. Prevent frequent freezing and thawing, and do not move them except for cause. Above all, and without which all other precautions are of no avail, do not leave too long in the ground, and store dry, if you would not have roots and tops, and consequent rot to contend against.

Matinecock, L. I. D. K. YOUNGS.

SMALL FRUITS IN SOUTH ILLINOIS.

My experience with the grape is briefly this: Have fruited Isabella, Catawba and Concord, and they all rot more or less, except when protected from the *dews*. Either of them, when trained against the side of a building with a projecting roof or on a covered trellis, ripen their fruit well.

Without any protection of this kind I have not as yet seen a vine that would ripen *all* the fruit set, the loss by rot being from one-fourth to three-fourths, and sometimes all. The Catawba mildews some; the Concord very little. We have copious dews here during the entire summer, and to this I attribute the rot. I have noticed in several places here Catawbas and Isabellas grown by persons who knew nothing whatever of pruning, trenching or underdraining, and yet those vines, when allowed to extend under some shed or projecting roof, would ripen plenty of fine large clusters *where sheltered*, sometimes where a part only of the vine was sheltered, the part exposed to the dews would invariably be damaged by rot. The best plan that I can think of for the amateur to grow fine grapes in this region, in a small way, will be to put a cover of boards on his trells 2 feet or more in width. This plan is recommended by Wm. Saunders, in Patent Office Report for 1861.

Doolittle's Blackcap Raspberry.

have fruited this two seasons, and must say it promises better here than any of the six sorts I have tested.

Brinckle's Orange would be my choice for family use if it did not winter kill, but it is too tender here unless well protected.

The Doolittle is perfectly hardy, a great bearer, and I think will bear transportation well. They are easily dried, and are then worth in Chicago thirty cents per pound.

Strawberries.

The white grub is destroying a large portion of the strawberry plants in this county; growers, however, are not discouraged, but will plant largely next spring. The Wilson is grown here more than all others put together.

Union Co., Ill., Oct. 26, 1863. A. BABCOCK.

☞ Gen. JOHN J. VIELE of Eagle Bridge, Rensselaer county, N. Y., died on the 18th, aged 55, of dropsy. He was one of the best known men in the county, a lawyer, politician and speaker, ever since he attained to manhood. His death was unexpected, and causes deep sorrow to a wide circle of friends.

Gen. Viele was formerly an active member of the New York State Agricultural Society, and at one time a Vice President of the Society.

DENT CORN FOR THE NORTH.

MESSRS. TUCKER—In the Co. GENT. for Nov. 5, W. J. P. of Salisbury, Ct., inquires why Ohio "Dent" corn may not be as successfully cultivated in New-York as in Ohio?

I will not undertake to say positively why it cannot be done, but will give a brief statement of facts from which W. J. P. may *infer* that it would be unprofitable, to say the least.

In classifying corn into two classes, viz., "flint," or hard, and "soft," the Dent corn is to be regarded as a soft corn. It is a generally conceded opinion, if not a well established fact, that all flint corns have ripened better farther north than soft corns have—hence the "Canada flint," "Yankee," or Connecticut flint ripen well in Northern Ohio, in counties where the Dent will not ripen at all. The Dent corn has been tried in all of the eighty-eight counties in Ohio, but does not come to perfection and ripen well in more than thirty-four or thirty-five counties, and these are all south of the national road. In Northern and Northwestern Ohio, the Dent does not succeed any better than the ordinary corn does at Marquette—that is, it grows finely and forms fine ears, but does *not* ripen. The Dent requires to be planted early, and requires the longest season of any corn grown in the State. If then it ripens with difficulty in lat. 40 deg. N., I do not think it would do to try it in 42 or 43 deg., other things being equal. JNO. H. KLIPPART.

State Agricultural Rooms, Columbus, O., Nov. 7.

A CHEAP GATE.

MESSRS. L. TUCKER & SON—Among your gate plans let mine (not originally but by adoption,) have a place. Its perfect simplicity, cheapness and humility even will spoil it for some, but possibly not for others. Perhaps it is not worthy the name of gate at all, and yet I know several that have stood in gateways here many years and done good service, in exposed places, with the least outlay of any gates I ever knew. Although on the score of looks they would seem to belong only to board fences, they might be used in nearly all fences. These gates are merely two sliding panels of 14 feet long, of the same pattern as fence, only the boards are narrow to make the gates lighter. Each panel slides on two pins—rollers of course were nicer—and in the middle of the roadway is a post to brace the inside and foot of uprights, where they shut together. The sole fastening is a hook on one and a staple on the other. The only trouble we ever had was from careless teamsters, who would not open wide enough so as to pass through, without running against and breaking them down. The many advantages I need not enumerate. F. K. PHOENIX.

Bloomington Nursery, Ill.

Dent Corn Grown in Massachusetts.

The Ohio Dent corn can be successfully grown in Connecticut, and should infer that New York would be as favorable, when the season is of sufficient length for it to mature. It is two weeks later than early Northern varieties. The writer has raised that kind exclusively the past few years, finding his account in a greater yield than any other variety. Good soil and cultivation are all that is requisite for a large crop.

Seed brought from Ohio to Massachusetts, has this season arrived at a good degree of perfection. J. H. D.

Chicopee Falls, Mass.

HOW TO MAKE A FOOT-MUFF.

Those who take long rides in winter, are often obliged to resort to artificial means to keep their feet warm—hence hot bricks, heated blocks of wood and jugs filled with hot water are variously used. The foot-muff is a great improvement on all these. It may be made in different ways, one of the cheapest and most simple of which is as follows: Let the tinman make a square box, about one foot square and two inches thick, so as to hold water. A screw, turned by a button, is inserted into one of the narrow sides—the screw-hole should be large enough to admit a funnel. The box should be perfectly water-tight, the screw-hole being the only place for the admission and egress of the water. If a suitable screw cannot be procured, solder in a short tin tube about an inch long to receive a cork, which is to be tightly pressed in. This box when filled with hot water, which may be done in a few seconds, will retain heat a long time; but its efficiency may be greatly increased by encasing it with the muff. The box itself may be first covered with a piece of coarse carpeting, and then a sheep skin, tanned with the wool on, sewed on the upper large flat side of the box, somewhat in the form of a broad shoe, with the wool inwards, and large enough to receive both feet. This essentially completes the foot-muff. The more expensive ones are covered with furs, instead of sheep skin; and if the skin extends around the whole box the heat of the water will be retained a longer time. A well made muff of this kind, filled with hot water and placed in the bottom of a sleigh, will continue warm for half a day.

Striped Yellow Beetle Destructive to Orchards.

In passing through my orchard, I frequently noticed many nice grafts laying on the ground, badly eaten by this bug, described by ASA FITCH, M. D., in his work on Entomology, No. 9 of your ANNUAL REGISTER, as the Cucumber Bug or Striped Yellow Beetle, *Galeruca vittata, Fabriicus*—more familiarly known to most farmers as the Striped Pumpkin Bug.

When I found many on an apple I smashed them with my foot, passed on, thinking the apple had fallen, and the skin became bruised or cracked, and the bugs were there to suck the juice. When I picked my apples, (I pick all by hand,) I found a number on nearly every tree, more or less eaten by the bug. I at once made up my mind that they were not bruised by falling, and found they would eat through the skin of sound apples.

They have also been very destructive to the vining crop this season, more so than common. I kill them on vines with thumb and finger, or by the use of a cloth. On fruit trees it is too difficult a job. Have any of our agricultural men noticed anything of the kind on fruit before? If so, have they found any way to destroy them?

Cape Vincent, N. Y. E. C. KELSEY.

A GRAPE TRELLIS.

I have a grape trellis that I like better than any I have seen a description of. It is substantial, does not get out of place, and is rustic in appearance. It is made of five or six inch cedar posts, eight feet long, set six feet apart, with spruce poles fifteen or sixteen feet long, nailed on to the posts a foot apart, running the whole length. The posts cost eight and ten cents each, and the poles three dollars a hundred here. I have used this kind of trellis for a few years past, and like it better than wire. Laths can be nailed across the poles perpendicularly, to tie the growing shoots, if any one should wish, although I do not use them.—*Horticulturist.*

Wisely and slow; they stumble that run fast.

WARD CASES.

Those who have attempted to cultivate green-house plants in rooms, have met with two serious drawbacks.

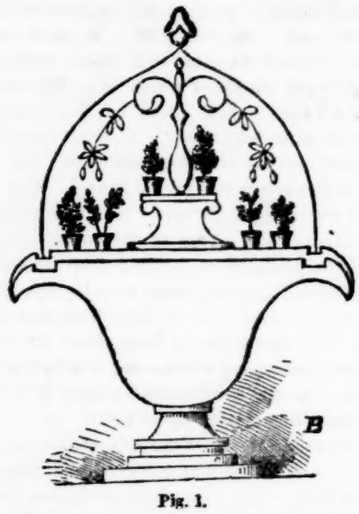


Fig. 1.

One is the liability to become coated with dust, and the other is the dryness of the air, which is greatly increased by stove heat. For these reasons there are but few plants that will endure for a long time in common living rooms. To obviate these difficulties, the Ward case has been constructed. It consists essentially in covering the plants with glass. This protects them from dust, and by confining the moisture which is constantly exhaled by the leaves, gives them a humid atmosphere. It also assists materially in equalizing the temperature, and shielding from the effects of the sudden changes which may occur in the room. For these reasons, the care of plants in these cases, is much diminished.

Fig. 2.

Fig. 3.

Fig 1 represents the section of a small and simple case—made by covering a cast-iron vase of plants with a large bell glass. Fig 2 is a cast-iron basket of plants, without the glass cover. Fig. 3 is the common Ward Case, attached to a table, and made about three feet long and two feet wide. The glass is nearly two feet high, besides the pyramidal cap.

A simpler and cheaper form of construction is shown in fig. 4, which is made of wood, and covered with window sash. If well constructed and neatly kept, it will have a very ornamental appearance. When kept in a room subject to occasional cold below freezing, the proper temperature may be maintained by the following contrivance. Let the pots stand on an iron or copper tray, (the pots being supported, if heavy, by iron bars,) beneath which is soldered a convex round piece of sheet copper, so as to form a flat boiler beneath the tray. A tube through the tray above admits filling the boiler and allows the escape of the steam; a small tube and cock below allows the water to be drawn off. A lamp placed under the boiler, heats the water and keeps the plants sufficiently warm.—*Tucker's Illustrated Annual Register.*

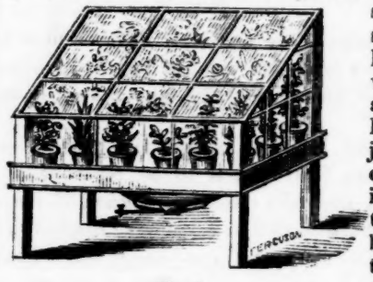
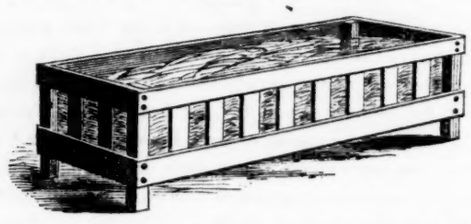


Fig. 4.

SHEEP RACKS.

All good farmers are aware that nothing saves fodder more effectually than good feeding racks. A poor rack is better than none at all, but it is desirable, of course, to have the best. One of the simplest and cheapest sheep racks is shown in the accompanying figure. The corner



posts are about three feet high, and are made of 3 by 3 inch scantling, one piece twelve feet long, making the floor. Inch boards are nailed on these posts, as represented in the figure, the top board being five or six inches wide, the bottom one about ten; the length of the rack may be about twelve feet, width two feet. On the horizontal boards are nailed shorter vertical strips, each five or six inches wide, and leaving spaces six inches wide, through which the sheep thrust their heads in eating. Boards are laid in the bottom on cross pieces, which connect the lower edges of the lower horizontal side board. These may be narrow strips with open spaces between them. The rack is now complete, hay being thrown in at the top.

The lumber required for this rack—one piece of 3 by 3 scantling twelve feet long; two inch boards, ten inches wide and twelve feet long, two five inches wide and twelve feet long, four end boards, five and ten inches wide respectively, and twenty-five feet of slats; fifteen feet of bottom boards complete the materials—the whole of these would be about ninety feet, and would cost seventy-five cents to a dollar and a half in different localities. Any farmer of fair ingenuity would make one in half a day—costing not to exceed two dollars for the whole—and paying for itself every month while in use, in the amount saved.

Influence of Agricultural Journals.

Upon the last page of the present Number, will be found the Terms and Inducements offered to Agents of the COUNTRY GENTLEMAN and THE CULTIVATOR for 1864. It will be seen that they are more liberal and comprehensive than we have before presented for a number of years.

We are led to extend these offers solely because the times seem to us favorable for the enlargement of our subscription lists, and because we think we may fairly depend upon the earnest exertions of our friends to accomplish that result. To such exertions we must look for the means of meeting the constantly increasing expenditures involved, not only in the cost of the paper we use, but in every other direction in which outlay is required—from the setting of the type and the mailing of the papers, to the editorial labor bestowed, the engravings made, and the contributions secured. As already stated, the reading matter of our papers will be on new type, and we hope, in other respects, to add to the value and interest of the various Departments to which they are devoted.

A few words as to the origin and objects of *Club prices*, may not be out of place. It was designed, when it first became customary to offer them, that this reduction, when a large number of papers is subscribed for, should go wholly to the profit of the Agent who spends his time in making up the club, and who pays postages, &c., out of his own pocket. But in the competition between different publications, and out of the public spirited efforts of those who did not care for any remuneration of the kind, the custom has arisen of giving this benefit largely or wholly to the individual subscribers themselves. We do not think this is altogether fair; the agent should charge a slight advance upon the publisher's price, which will at least pay his postages, and subscribers, who receive their papers at a reduced cost, owing to his efforts, should co-operate with him more readily and earnestly, in enlarging the list.

How it is with other publishers we do not undertake to say, but the club price of the COUNTRY GENTLEMAN is insufficient to meet the actual cost to us of the papers sent out at that rate. If we are then asked why these terms are continued, we reply that their sole object is the *extension of the list.* As the subscription is enlarged, and more become acquainted with the practical value of such a journal, we obtain permanent readers who will continue on our lists whether clubs are renewed or not, and who will be of so much additional assistance in reaching a still larger circle of readers from year to year. Now and then a friend writes to ask permission to send two or three subscribers at the lowest club price, and says, "if you can afford ten copies at a dollar and a half each, why not three or five?" The answer is, because so small a number is not a sufficient inducement to us, in its promise for the future, to send the papers for a year, without any profit, if not at an actual loss. And this will explain why we refuse to comply with directions sometimes, (but we are pleased to say, now very rarely) received, accompanied by the club rate for a single copy, either to "send the paper for the full time or return the money." Such remittances are credited for the period they will cover, at our published rates, and for that only.

—— Having thus invited the reader to look for a moment at the state of the case, from the publisher's point of view, let us remark very briefly some of the ways in which he is himself benefitted by the enlargement of our subscription list.

In our last number we asked a comparison between the intelligence and enterprise, taking them as a class, of those who read an Agricultural paper, and those who do not. In a locality in which a journal like this enjoys a liberal circulation, the results accomplished in time are very great. The merits of improved stock perhaps are first canvassed, and then new breeds are brought in; more attention is paid to fruits and flowers; new implements come into use, better buildings spring up, and, with increased attention to manures, there arises a better system of farm management throughout. Now, in none of these respects, nor in any other, can a man single handed, or two or three persons in a wide neighborhood, work one-half as effectively in the cause of improvement, as they can when those with whom they are constantly brought into contact are all more or less deeply interested in the same objects—where they read the same periodical—understand the end sought and are willing to do their share in bringing it about. How many of the agricultural societies now in operation, owe their existence wholly to the attention attracted to the subject through an Agricultural paper; and there is no way in which the success of such a society can be more surely promoted—we say this, not from our own observation only, but on the testimony of many experienced Society officers—than by arousing the interest of as large a part of the members as possible in agricultural reading.

Now a farmer who is striving to excel likes to meet his neighbors in competition, not only to compare his own results with theirs and exceed them if he can, but also to learn from them, when they are accomplishing more than he. Hence he is not only directly interested in arousing the same ambition in others, but, more than this, there is not a department in Agricultural improvement in which he is not advantaged by enlisting in it those around him. Thus, if he would better his live stock, he desires that others should have the same object in view, that an interchange of blood may be conveniently attained by both, or that a market may be made for what he breeds. And it often happens, or might happen, that several could combine to procure either valuable stock or expensive implements, or seed grain in quantity from a distance, or draining tile, or fruit trees, (or almost anything else,) at a reduced cost to each by such a combination. Nothing of this kind however, can be effected when there are but one or two in a township who know, or care to know, anything about what constitutes improvement.

Is it to be supposed that a number of good farmers, who are bringing their land into the highest state of cultivation attainable, do not thus affect the agricultural reputation of their whole locality and the consequent value of every acre of its land, when brought into the market? On the other hand, what is there that tends to render any district more forbidding to intending purchasers, than to find it characterized by evidences of shiftlessness and decay, and to be told that even if the land was naturally good, it is now pretty thoroughly "worn out." Those who know the time and expense and patience necessary to bring up such land, will not need the assurances of others that the reputation of such a character is most damaging.

It is very possible that when an Agricultural writer visits his farming readers, a pardonable desire to exhibit only that which is best worth seeing, may lead to his having a somewhat rose-colored view of the state of improvement; but, with all due allowance on this score, we cannot so far mistrust the evidence of our own observation as to suppose that all this mass of facts, of experience, of practical and scientific truth, which we are sending out to thousands of readers from week to week throughout the year, can fail altogether of its object—that it is not doing a work which will be more fully appreciated at some future day, when the history of Agricultural improvement in America comes to be written—when the obstacles it has had to encounter are understood, and when the triumphs it is now working out shall have borne the full fruitage of which they are capable. One great need, at present, is the more general imitation of the examples which *some* good farmers in every State and County and township are setting—a more general knowledge of the real capacities of our soils, a more liberal and business-like employment of the farmer's capital, the collection of a still wider range of experiences and larger store of facts. To these ends, we urge upon our readers that they should extend, as they may be able, the circulation of this Journal; that they should contribute for it what they are daily learning in the field or farmstead, and that they should recognize, in both respects, the identity of its interests with their own.

SEEDING IN THE AUTUMN.

MESSRS. EDITORS—As your correspondent C. H. H., wishes your opinion, as well as some others who have had experience in re-seeding wet lands to grass in the fall, I will give him the benefit of my experience in this matter.

On those pieces of land which I have plowed and seeded in the fall, I have used timothy seed exclusively, yet I do not see why red top seed could not be used in the same way with as good success.

The land which I have treated in the way mentioned, is a piece of level land which is too wet to plow and cultivate either in the spring or fall, but is generally dry enough to plow the latter part of summer. In several different years, in the latter part of August and fore part of September, I have plowed and seeded down pieces of this land with good success. I plow the ground in narrow lands, plowing only on the sides of the lands. This leaves the land in narrow ridges with open furrows between them, and after the land is plowed I run the plow through these furrows to deepen them, after which the loose soil in them is thrown out with a shovel and hoe, and spread on the land each side. This leaves a ditch about a foot deep for the purpose of draining off the surface water. After the land is plowed I cart on and spread a good dressing of manure, and have it well harrowed in; then sow the grass seed and cover it lightly. I use my wire tooth horse-rake for this purpose. After this I go over the land with a hoe, to smooth any places that the harrow or rake has left. With land treated in this way, I have never failed of having the seed catch well and make a good growth before winter, and produce a good crop of hay the next season. The first crop is generally uneven in its growth, and the quality like rowen. The second year the grass gets its full growth, and for several subsequent years the land will produce heavy crops of grass. On the land which I have seeded in the fall, there will generally be some spots on which the grass will winter-kill. On these places I sow more grass seed in the spring following, and it generally grows without any covering.

I think that this method is decidedly the best way of treating all meadow lands which are too wet to cultivate, and the surface of which is smooth enough so that the sod can be well turned over.

For several years past I have plowed and seeded down some of my mowing land in the spring. My plan is to take a piece of land that needs renovating, and plow it with a side-hill plow; commence on one side of the field and plow it backward and forward till it is finished. This way of plowing leaves but one ridge, and one open furrow on the piece after it is plowed. If the first furrow that is turned is taken off and carried and put into the last one, it leaves the land nearly as smooth as it was before it was plowed. A dressing of manure is then spread on the land and well worked in with the cultivator and harrow, after which it is sown with spring grain and seeded down. In this way I have never failed of getting a a good crop of grain, and a good catch of grass, and for several years afterward good crops of grass. I have also plowed other pieces of grass land in the spring, put manure on after plowing, cultivate it in, and plant it with potatoes. The next spring put on a little more manure and work it in with a cultivator, so as not to disturb the turf below, and seed down again with a crop of spring grain. The success with this mode of treatment has been nearly the same as that of seeding down the first season. Where much land needs renovating, it can be done much quicker in these ways, than any other I have tried, and the crops of grass that follow are as good as where the land has been cultivated longer. C. T. ALVORD.

Wilmington, Vt., August, 1863.

THE POLLED CATTLE OF SCOTLAND.

MESSRS. EDITORS—I notice your article on the Polled cattle of Angus and Galloway. These cattle have always been favorites with me from boyhood, and if I were now on a stock farm, I would breed them in preference to any other cattle. I have three reasons for this decision.

1st. They can be selected of almost as perfect forms (though not so showy) as the Short-Horn, Hereford or Devon.

2d. They would be equally hardy. Some will answer more so. Perhaps they are, in their present state; but when we come to breed them with care, "drawing them fine," as we say, I doubt whether they would be hardier or live on closer pastures than the Devon.

3d. They are without horns, which I consider a great advantage to the breeder, as it lessens accidents, and is more economical, especially in transporting them a long distance to market, as they require less room in the cars, and are more easily handled.

As your junior associate, Mr. LUTHER H. TUCKER, has been in Great Britain some eighteen years more recently than myself, I should be glad to learn from him how the Galloways have lately been improved. I suppose chiefly by a better and more careful selection of the animals bred from. But I recollect, when in England, being struck with admiration of the fine forms of a lot of polled black cattle I saw there. I asked their owner, a large grazier, how it was. He informed me that they had a *stolen cross* of Short-Horn blood in them, and called my attention to nubs of horns occasionally on them, some of which hung to the head by short, tough ligaments, the result, he said, of a cross with a horned bull.

In the vicinity of this city (New-York) I frequently meet with Polled cows, white, roan, red and white, and occasionally wholly red. The colors are as bright and pure as in the Short-Horn, and now and then I could select a specimen almost as perfect in form as the average of this distinguished breed of cattle. As a general rule they are great milkers, good handlers, and fatten kindly when dried off.

If I were on a grazing farm, I would pick up a select lot of these cows, get a very fine, compact Short-Horn bull, and cross him on them. When horns began to appear on the calves I would burn the tips with a red hot iron, and thus stop their growth. By careful selection of the progeny I would get a herd in a few years which for the dairy and butcher would be scarcely inferior to the Short-Horns—their colors would be as beautiful and their symmetry approaching them in perfection. The size of these animals could be bred to suit their pastures; they might be medium like the Devons, or large like the Herefords and Short-Horns. Thus cheaply would another valuable subvariety be added to our fine herds of cattle, whose utility and economy of production could scarcely be surpassed. A. B. ALLEN. *New-York, Oct.* 31, 1863.

[As to the improvement of the polled black cattle, one hears it alleged that an occasional intermixture of Short-Horn blood is now made to perfect the symmetry and add to the precocity of the former; but we believe the best breeders do not admit this—at least the writer has met with no one who would—claiming that improvement has been accomplished by judicious selections and careful breeding without going outside of the breed itself. If we are wrong in this statement, and certainly none of the black polled cattle we saw in Scotland in 1859, showed

signs that were perceptible in color, or otherwise, of a Short-Horn admixture—our friends of the *North British Agriculturist* will perhaps be kind enough to correct us. We noted in the best Angus and Galloways, aside from perfection of form, a softness of skin and mellow touch, combined at the same time with such thickness of skin and hair (the latter silky and as soft as the former,) as would seem, whether correctly or not, to favor the idea of their hardiness, at least with good treatment, in almost any climate. One experiences as much pleasure in feeling them as he would in finding his thickest winter boots as soft and flexible as a kid glove. The red and parti-colored polled cattle alluded to by our correspondent, we may suggest, are possibly descended from Suffolk (or Norfolk, as frequently termed,) polled cattle, which have perhaps occasionally found their way as milch cows or otherwise to this country. This is a breed possessing many merits, particularly for the dairy, and his description would apply to them (or crosses from them) quite nearly. The Angus and Galloway cattle are pretty sure, we fancy, to carry more or less black into the color of their descendants.]

FARM ACCOUNTS.

I have read with interest some of the articles in the Co. Gent. on the subject of Farm Accounts, believing that it is of essential importance to a proper understanding of the operations of the farm, that correct and explicit accounts be kept by every Farmer. But I have not yet seen any detailed plan laid down by which such accounts can be simply and easily kept, so as to be embraced by farmers generally.

It is well said that the common excuse for the neglect of this important branch is comprised in the phrase "I haven't time." And when we reflect on the manner in which the accounts of merchants, manufacturers, and other extensive dealers and operators are conducted, with their waste-books, journals, ledgers, bill books, cash books, &c., &c., requiring sometimes the labors of several clerks, a contemplation of these complicated and extensive accounts, (assuredly required by the nature of the business to which they are applied,) together with perhaps a recollection of having endeavored to wade through some perplexing system of book-keeping at school, has no doubt discouraged many a farmer from attempting to keep such accounts as would enable him to ascertain the profit or loss of his several crops, and have an understanding of his whole farming operations, inducing him to pursue a blind course on these important points—not knowing whether he is making or sinking money.

I have no doubt every farmer keeps some kind of accounts as a record of what is owing to him, if not of what he owes. But that is not sufficient. He should, as has already been suggested in your valuable paper, keep an account with every field, or at least with every crop, and every kind of stock which he keeps on the farm.

What is wanted then, is a short and simple method of keeping such accounts, so that the farmer will have time to do it, without intruding on his customary affairs. If he undertakes to keep many books—day-book, journal, ledger, &c.,—he may be particular in making his original entries; but some occurrence will take place, or some urgent matter must be attended to, that will hinder the journalizing or posting, and his books will fall a month, six months, yes, a year behind. Every week that passes over increases the labor, until at length it will appear herculean, and he will become discouraged, and give up as a hopeless task "keeping farm accounts."

As an essential part of my plan, I would discard all books but a ledger, except a small memorandum book, with a pencil in it, to be carried in the pocket—whereby any transaction occurring when away from the house can be put down on the spot. Some have suggested a day book for the permanent accounts, but I say it should be a ledger. It may be of heavy foolscap, bound long folio, the pages printed on, with an index complete. Have it neatly headed with all the accounts desired to be kept, and enter each account with its proper page under the respective letters in the index. Then every evening post each entry from the memorandum book direct into its proper place in the ledger, and the work is done. It would be well to look over the memorandum book at the end of each week, to see that nothing has been omitted.

The accounts should be kept by double entry, because it saves much trouble in balancing the book. This can be easily done by opening a cash account in the ledger, which should be balanced at the end of every month, and the balance compared with the cash on hand, which will prove the correctness of the account.

The farmer generally has sons, who if encouraged to take a part, would be efficient helpers in keeping these accounts. Even a boy of ten or twelve years could post the accounts into the ledger, his father giving out the items from his memorandum book, and superintending the operation; which would soon become a familiar and pleasant exercise for the youth. He would thus not only acquire a knowledge of the commercial business of the farm, but he would become doubly interested in its agricultural operations and experiments. Seeing the accounts with the various crops growing in the book, while the crops themselves are growing on the farm, he would be stimulated to persevere by the deepening interest he would feel in the result.

The account with each crop should be footed up, and the balance carried to profit and loss, as soon as the crop is sold, and all the accounts in the ledger should be balanced at the end of the year, without fail—in order that the farmer may be enabled to ascertain the true state of his affairs, the great object of keeping "farm accounts," and a consummation worth double the trouble it will require in the method proposed.

The family expenses, and everything in the nature of an account should have a place in the ledger. It is not doing justice to the fields or the crops to take out first the produce consumed by the family, and credit only the remainder to the particular crop.

If the farmer wishes to keep a record of the weather, or of the time of plowing, seeding and harvesting, or any other occurrences, it must be kept in a separate book in the form of a diary, being careful to head each page with the day, month and year for the convenience of ready reference. J. *Jefferson Co., Ohio.*

☞ The third annual meeting of the Indiana Pomological Society, will convene in Indianapolis on Tuesday, January 5th, 1864, and continue in session four days. A general invitation is extended to all persons who are in any way interested in fruit culture. It is hoped that all who can possibly do so, will bring with them samples of fruits and wines. An interesting meeting may be expected, as essays will he read by many of the best fruit-growers of the west, to be followed by discussions on the subjects to which they refer.

Disease among Swine.—In the neighborhood of St. Clair, Franklin Co., Missouri, hogs in apparent good health and condition are dying by scores, some farmers having lost the greater part of their stock. In some places the same affection, or some other fatal disease, seizes fowls, and they droop about for several days, become blind and perish.

CONVERTING STRAW INTO MANURE.

An address on this subject was lately read before the Agricultural Society of Boroughbridge, England, in which the speaker endeavored to furnish a satisfactory answer to the two following questions, namely, what description of stock must be employed on our respective farms to convert the straw into good manure, and at the same time leave the best return for the food consumed and the capital employed? Secondly—what arrangements must be made so as to ensure the good quality of the manure, and to preserve it from waste during preparation?

There is much in the extended replies presented to these questions, which is of as great value here, especially among grain farmers, as in the West Riding of Yorkshire. It is their great object to dispose of their straw to the best advantage, whether as food or litter.

Feeding Qualities of the Different Kinds of Straw.

"By some," says the writer, "it is urged that whatever cereal is most suitable to a soil, there the straw of that cereal will be most valuable as food; by others, that cattle are themselves the best judges, and that therefore that straw which the stock seems to relish most should be retained exclusively for food, and the remainder condemned for litter. Pea haulm, when well harvested, is undoubtedly more nutritious than any other straw, and should therefore be used as food, and is very valuable for ewes at the lambing season. Bean straw is decidedly inferior to any other kind of straw, except the pods, on which animals do well, if allowed to pick them off, and yet a great difference of opinion exists, some persons considering that beanstalks are almost equal to clover-hay; and others think them fit only for litter. There is a great difference of opinion of the feeding value of wheat, barley, or oat straw, and perhaps no very broad or permanent distinction exists. Dr. Voelcker tells us that the composition of straw is materially influenced by the degree of maturity in which the corn is harvested—as for instance, it has been proved by analysis of oat-straw, (which is generally next in value to pea haulm,) that of sugar, gum, and other matters in food, not less than 16 per cent. occurs in green straw, as against 3 per cent. in over-ripe straw, and 10½ per cent. in the fairly ripe sample. It is interesting to learn that hard and dry as straw appears to be, it contains, among other nutritious matters, an appreciable quantity of a nice yellow sweet tasting oil. In a sample of well harvested wheat straw, neither under nor over ripe, there was at the rate of 39 pounds of oil in a ton of straw. The same remark applies to barley straw, which is more suitable for young stock, as it does not contain so much woody fibre, and is consequently easier of digestion. I may here remark that barley chaff, when scalded with boiling linseed is much relished by horses, and I am quite satisfied that the whole of this article should be *thus* used for food."

Dr. Voelcker has remarked that some farmers are as much inclined to underrate the value of straw for feeding as others are to exaggerate it, and while the main anxiety of the first-named class seems to be how to tread into manure all the straw grown on the farm; that of the second is, how to stuff stock with all the straw at their disposal; the creed of the former being that neither little nor much will do their cattle any good, whilst the latter hold that any appropriation of it for litter is an intolerable waste. Whether, however, the feeding value of straw, especially if combined with some concentrated or more readily digestible food, be more or less, its value in the farm-yard is essential—not so much that it is *itself* a manure of any importance, its own fertilizing value being quite insignificant, but as an absorbent of the most valuable portions of the excrements of animals, and as the best fixer of the ammonia which is always generated when excrementitious matters in contact with porous materials enter into active fermentation. So, in feeding, when used alone its value becomes very small, as it does not contain all the material necessary to support the animal in a thriving state; but when associated with food containing flesh-forming matters, it is considered in England to be worth from $7.50 to $10 per ton, (30*s.* to 40*s.* sterling,) as a feeding material.

The Value of Farm-Yard Manure.

This must vary according to the system adopted; "it is certain that a man must not expect the same increase of crops from washed and decayed straw, as his neighbor, whose manure is made under cover, and contains the essence of cake and corn. Dr. Playfair has compared the body of an animal to a furnace—the food is fuel—and the excrements are the ashes, and the gases respired from the mouth are of the same composition as those which fly up the chimney of the furnace. If the food or fuel supplied to an animal be abundant and of rich quality, the manure produced is valuable; but if the food is indifferent, too watery as white turnips, or too woody as straw, or if supplied scantily or insufficiently, the manure is almost valueless, and all the turning and heaping up possible will not render that valuable which was before almost worthless. The manure of a full-grown animal cannot be so much exhausted as that from young growing animals, to which bone and muscle have to be supplied, neither can the manure of working cattle or milch cows be equal to that of fattening animals, even when kept on the same food."

These considerations lead to the conclusion that *fattening animals are producers of the best manure;* "for, to make an animal fat for the butcher at a profit, it must be done as quickly as possible, and in order to accomplish that object, it must be amply supplied with rich, flesh-forming food; and as an animal when almost fat only extracts from the food a small proportion of the nitrogenous matters contained, it follows that the remainder will be ejected from the system, so that the nearer maturity an animal is, the richer will be the manure." It is thus bad economy to send animals to the butcher when only *half fat.*

What Kinds of Food to Use with Straw.

According to a table in the fourth volume of Bath and West of England's Society Journal, the value of different articles of cattle food is placed thus:

Number of Pounds Weight of each Required to Make One Pound of Beef.

Barley	6	Linseed Cake and peas, equal quantities	4½
Oats	7	Clover Hay	12
Beans	8	Swedes	150
Peas	8	Mangolds	150
Rape-cake	6	Carrots	150
Cotton-cake	6		
Linseed-cake	5 or 6		

In deciding what to use, the relative price of these articles of food must be taken into account as well as their nutritive value. The writer says there is no doubt that it is more profitable to associate roots, cake and grain together in the feeding of cattle than to endeavor to feed an animal with an abundance of roots alone; and, as in the experiment of linseed cake and peas, the most profitable results occur, according to the foregoing table; so he thinks the case to be generally, that food of different ten-

dencies should be amalgamated, as is the case here, the oilcake being a relaxative food, while the peas have an opposite tendency.

As to feeding oil-cake, Prof. Voelcker is of opinion that we may fairly expect three-fourths of the nitrogenized matter of oilcake back again in the manure, and perhaps one-half of the money value of rape or the best cotton cake; and Prof. Anderson remarks that a series of experiments appeared to show that of food generally about one-third or one-fourth of the money value, and seven-eighths of the valuable matter appears in the dung. "Thus we arrive at the conclusion that to obtain good manure our stock must be amply supplied with good food."

Sheep in Treading Down Straw.

"The Spaniard has a proverb that the sheep treads on the land with a golden hoof. Will it not be well, therefore, to inquire whether the same remark may not apply to sheep treading on the straw which we wish to turn into manure. It is the custom in some parts of Hampshire on heavy lands, to spread the wheat straw (from the thrashing machine) on the land, fold sheep on it, and then plow it in—perhaps the nature of the soil warrants the mode." The writer then described the mode adopted for a number of years on strong land by Mr. Ruston. "He had between 600 and 700 sheep and lambs in his ordinary fold-yards, —being allowed as many mangold as their bodies would bear, to which is added cake or corn, along with a sufficient supply of dry food in the shape of chaff—hay and straw—about 4 yards square being allowed for each sheep —the yards being properly drained and littered every day with a slight covering of straw, and twice a day in showery wet weather; thus, if the sheep be free from lameness when placed in the yards, and the litterings carefully attended to, there need not be much fear of foot rot—their feet should be pared at least every three weeks. Mr. Ruston considers that six lambs will tread down as much straw as a £12 or £14 bullock, and calculates that instead of one hundred bullocks leaving £150, after paying for the artificial food, 600 lambs did leave £390 for the same quantity of food, the sheep thus leaving a profit of £240 in excess of the bullocks. The manure may be made in folds in any field by means of hurdles, and thus the carting of the manure be saved." Mr. R. thinks lambs pay better than sheep, and either of them better than bullocks; previously to the lambs being placed in yards they should have been on rape, so as to strengthen them and render them better able to bear the relaxing properties of the mangolds.

It is the opinion of Mr. Lawes that there could be no material difference in value in the manure obtained from sheep and bullocks eating equal quantities and qualities of feed—the quality of manure being dependent upon the food and not upon the animal; but, as sheep manure, when kept in a heap, decomposes rapidly, it should not be spread in large quantities on light land for cereals, as it is very quick in its action, and causes them to run too much to straw.

Value of Shelter.

The speaker stated that according to experimental trial, it required 150 lbs. of Swede turnips to add a pound weight to sheep exposed to all weathers, while 100 lbs. with shelter gave the same result.

"The manure is likewise impaired by want of shelter, for, as the animal is a species of furnace in which food is consumed, it follows that the more rapidly the animal heat is carried off, the greater the consumption of heat-producing food to maintain it, and thus the ashes must necessarily be deprived of material value as manure. When other yards are used, the floor should be paved or otherwise rendered impervious to wet, the soil having been previously excavated to the depth of four or five feet, and drains so arranged as to carry off superfluous moisture into a tank; the sheds should be wide, and, along with all other buildings, should be spouted, that no water except that which falls on the exposed surface of the manure, be allowed to enter the yards. I think the best style of building for feeding in, is the loose box or covered homestead, which may be arranged in yards, or in a series of loose boxes, (as described by Mr. Hayes at the Pembroke Farmer's Club,) twelve feet or so square for a pair of oxen loose, or a larger number of smaller ones; the floor is sunk three or four feet below the feeding alley, and is asphalted; twelve inches of soil is placed upon this, the animals are littered with 20 lbs. of straw each per day, and this is not removed until the box is full. By this system the comfort of the animal is secured, and the manure will not have received a drop of rain water. The manure thus made must necessarily be superior to that made by stall fed cattle, which is thrown on a heap at the feeding-house door, or into a court under young stock, where it would be plentifully washed by the rains and weakened thereby. By means of the covered homestead, a great quantity of straw would be available for fodder which would otherwise be needed as litter, and thus a greater number of cattle might be wintered advantageously, and the manure will be at once fit for application to the land."

Turning and Handling Manure.

He thought the throwing of manure into a heap, before its application to the land, important as intermixing it more completely and destroying the seeds of weeds it might contain. But "it will not supply fresh constituents; it may diminish the water contained, decay the vegetable fibre, condense and render manure more portable and adapted to the organs of the plants, but can add nothing which does not already exist. When manure is thrown into a heap it should not be less than 5½ or 6 feet thick, and should be covered with road scrapings or soil, or the ammonia should be fixed by the use of suphuric acid, gypsum or sulphate of iron, diluted with water, and sprinkled over the heap. It has been remarked that one can at first sight, judge of the industry and degree of intelligence of a farmer by the care which he bestows on his manure heap, which should be so placed that the liquid which escapes should not be allowed to flow into the nearest ditch and be thus wasted. It has been computed that on some farms, where due care is not taken of the liquid drainage from the manure heaps, the loss is equal to three cwt. of Peruvian guano for every 25 loads of manure made on the farm."

Treatment of Manure in the Heap.

If the farm is situated in a district with the average rainfall, Prof. Tanner remarks that when the fermentation of a manure heap is proceeding rapidly, an occasional supply of water, or what will be better, liquid manure, should be pumped or thrown upon the heap, not sufficient to cause drainage, but still to soak into the center of the heap; the sinking of an iron bar into the center of the heap will aid the passage of the water, and at the same time assure you whether additional moisture is needed or not. It is necessary for the more complete decomposition of the dung to turn it so as to admit air; then be especially guarded and take care that sufficient moisture is also added at such intervals as may be necessary. Remember that by the admission of air you are stimulating a slow fire, which, if allowed to proceed unchecked by the presence of moisture, will dissipate into the air much valuable fertilizing matter, but if judiciously controlled, you will be able to change the condition of your manure, while at the same time you will secure all its fertilizing matters.

The following were the conclusions reached: That in order to convert straw profitably into manure, the food which is supplied to stock should be such as is suited to their wants; that the quality of manure depends greatly on the quality of food supplied to animals; and thirdly that the covered homestead best affords comfort, economises food, and prevents injury to the manure by drouth or excessive moisture. It may be well, he added, to bear in mind the remark of Mr. Bakewell of Dishley, which is as true now, as it was when uttered. That the road for a farmer to get rich is to breed the best stock of whatever kind, as the best consume no more food than the worst. Good farming, said that celebrated man, is to get a dinner for your appetite, while bad farming is only getting an appetite for your dinner.

THE CULTIVATOR.

ALBANY, N. Y., DECEMBER, 1863.

☞ Allusion has been sometimes made in these columns to the experimental Wheat field of fourteen acres on the farm of J. B. LAWES, Esq., of Rothamsted, England, on which this grain has now been grown every year for a series of *twenty consecutive seasons.* In an interesting letter, under date of Oct. 10th, to the London Times, Mr. L. presents the following statement as to the treatment adopted and the crops obtained:

During the whole of this period one portion of the land has been left entirely unmanured, another has received 14 tons of farmyard manure annually, and the remainder has been divided into numerous plots, which have respectively been manured with different artificial combinations, some calculated to yield moderate crops, and others the heaviest produce which the characters of the soil and seasons will admit of. With some exceptions the same description of manure is applied year after year on the same plot, so that the variation in the produce from one year to another is mainly due to the characters of the seasons; and experience has shown that the produce of this field affords a tolerably correct indication of the general character of the wheat crop over a pretty wide area.

The following is a statement of the amounts of produce obtained without manure, and by farmyard manure, in 1863, compared with the average of the preceding ten years under the same conditions:

	Bushels of Wheat per Acre. Harvest, 1863.	Average of ten years, 1853–1862.
Unmanured every year,	17¼	15½
Farmyard manure every year,	44	35¼

Thus, even the unmanured land has given rather more produce in the favorable season of the twentieth year than the average of the preceding ten years; but the increase due to season was far greater where the farmyard manure was employed. It was even greater still in many of the cases where artificial manures were applied, as the following results (which include those of all the plots where the yield of the present season exceeded 50 bushels per acre, will show:

Bushels per Acre. Harvest, 1863.	Average of 10 years, 1853–1862.	Bushels per Acre. Harvest, 1863.	Average of 10 years, 1853–1862.
53½	35½	53¼	33¼
54	35¾	53¾	34
56½	37	54	33¾
55	37½	53½	34¾
55½	33¾	56½	37½
54¾	34¼	55	38
53¼	34½		

It is seen that in almost every one of these cases the produce of 1863 was one-half more than the average of the preceding ten years, with the same description of manure. The quality, as indicated by the weight per bushel, was also considerably above the average. It should be observed, too, that on only one of these plots has there ever before, during the whole course of experiments, been obtained as much as 50 bushels per acre, and on it only twice—viz., in 1854 and 1857.

I may add that in an adjoining field, not treated experimentally, but under the ordinary management of the farm, the yield of wheat this year (after clover) is more than 63 bushels per acre.

Mr. LAWES remarks, in conclusion: "These results may, I think, be taken as fully confirmatory of the generally expressed opinion, that the wheat crop of 1863 is one of the largest that has been grown for many years, and also of superior quality. These who fear that our soils are becoming rapidly exhausted may, perhaps, derive some comfort from the fact that a field of ordinary wheat land has grown twenty crops in succession, the twentieth crop, even without manure, being heavier than the average of the ten preceding years, and that obtained by various artificial manures being considerably heavier than in any preceding season of the series."

☞ Prof. EBENEZER EMMONS, M. D., late of this city, died on the 1st October, at Brunswick, N. C., in the 65th year of his age. Prof. E. was one of the leading scientific men to whom the Geological Survey of this State was committed; and while there may be differences of opinion as to the manner in which the work was conducted, and while some of the views entertained by Professor E. have met with warm opposition, he undoubtedly possessed large scientific attainments, an intellect naturally of great scope and a high order, and controversial faculties of more than usual strength. He had long held professorships in the Albany Medical College and in Williams College, Williamstown, Mass.

☞ Among the Implements exhibited at the late State Fair at Utica, the Harrow made by Mr. JOHN E. MORGAN of Deerfield, Oneida Co., received the first premium in its class, but was overlooked in the notice of these implements in the COUNTRY GENTLEMAN. We believe it to be well worthy the prize it received, and are pleased to know that the inventor and manufacturer is realizing a handsome sum for the rights as well as for the harrows—which indeed is his excuse for not advertising, that he is operating already to the full extent of his present facilities.

☞ It is stated that Mr. THOMAS S. LANG of North Vassalboro, Maine, well known as a stock-breeder, has disposed of his horse "Cloudman" to Mr. Bonner of the New-York Ledger, "for the snug little sum of $20,000." It is likewise asserted that this horse lately made a single half-mile heat in 1:10, and that his mile scores "very far down among the twenties."

☞ The admirable little Microscope advertised in this paper for some time past by Mr. HENRY CRAIG, New-York, will be among the favorite gifts the coming Holidays. See new Advertisement this week.

CHEESE FACTORIES.—The Lowville Journal (Lewis Co., N. Y.) says that the Cheese Factory in that place have sold their cheese at 14 cents per pound. The whole number of cheese made up to Oct. 9th, was 1,123—will average about 150 lbs. each. Deducting 148 cheese sold in the spring, the amount sold at this time is about 145,000 lbs. bringing about $20,000.

STOCK SALES.—We are requested to publish that Mr. JOHN S. GOE of Brownsville, Fayette Co., Pa., has within a year past sold from his fine stock as follows:

2 Cashmere goats, D. H. Ryall.
5 Messenger colts, do.
1 Short-Horned bull, do.
2 Short-Horned cows, do.
3 Short-Horned Calves, do.
119 Merino ewes and 2 bucks, do.
6 Merino bucks to S. Brown.
2 Merino bucks do.
9 Merino bucks, J. McCrary.
2 Merino bucks, A. Boyd.
1 Merino buck, L. Lanehart.
2 Merino bucks, R. Elliott.
2 Merino bucks, E. H. Palmer.
1 Merino buck, S. Sands.
5 Merino bucks, H. Brachrill.
1 Durham bull, J. G. Strean.
2 Cashmere goats, Van Amberg & Co.
1 Cashmere goat, Dr. T. F. Robinson.
1 Cashmere goat, J. Jackson.
1 Stallion to Isaac Bailey, and six brood mares to various persons.

Mr. JOHN MCHARG of Bethlehem sends us a barrel of Northern Spy apples, which are very handsome specimens of this popular variety, and for which he will please accept our thanks.

☞ Why does our friend HARRIS of the *Genesee Farmer*, continue to advertise his paper as the "oldest agricultural paper in America," and to assert that it was "established in 1831," when he well knows both statements to be utterly destitute of any foundation in fact? His Genesee Farmer, as he very well knows, has no more connection with the original Genesee Farmer established in 1831, than it has with the original New-England Farmer, established in 1822. The facts are as follows: The first Genesee Farmer, *weekly*, was established by LUTHER TUCKER in 1831, and by him continued until the close of 1839, when, on the death of Judge BUEL, that paper was removed to Albany, and united with THE CULTIVATOR, under the title of "THE CULTIVATOR, *a consolidation of Buel's Cultivator and the Genesee Farmer*," under which title it was published for some years, when the latter part of the title was dropped as unnecessary. On the removal of the Genesee Farmer from Rochester, a *new* paper was started there, called the "*New Genesee Farmer*," and this is the origin of the *present* Genesee Farmer. So that instead of being "established in 1831," Mr. HARRIS' paper was established in 1840, and instead of being the "oldest agricultural paper in America," it is the junior of several others.

The senior editor of this paper may, perhaps, be considered a little sensitive on this subject; but having commenced his Genesee Farmer in 1831, when there was little demand for such papers, and continued his labors in behalf of agricultural improvement from that day to this, he confesses to a great dislike to having nine years of his labors appropriated by another concern.

☞ There is nothing reprehensible in the peddling of RHUBARB roots about the country; on the contrary, it may afford some farmers a new opportunity of growing stalks to make pies of, and, should they so choose, such wine as they can from the juice. But why call it the "Wine Plant?" Why advertise, as some are doing, "the genuine Myatt" or "the genuine Linnæus *Wine Plant*," as though these were novelties that could nowhere else be obtained than of certain favored cultivators and their peripatetic agents? We do not know what price rhubarb roots sell for under these names, but it is singular if the novelty of the name is not an item in the bill. Farmers should know already, and this is intended to apprise such as may not, that every nurseryman, and two-thirds of the vegetable gardeners in the country, have these and other good varieties of rhubarb for sale; and, if they wish to buy, they are advised to pay no more for them under the high sounding title of "wine plant" roots, than they can get the same thing for, under its genuine appellation.

That a drink can be made from rhubarb no one disputes—such as it is—and if sugared and spirit-ed, something that unpracticed persons may imagine to be a tolerable imitation of wine. Currants, and elderberries, and various other plants, will afford pleasant beverages; and some of them, if properly manufactured, have a distinctive character of their own which is really very fine. But we have never seen anything made from rhubarb yet, that was not intended to be an imitation of "Port" or "Madeira"—or something else—for unless one was told, no person who had ever tasted the un-drugged imported article, could decide exactly *what* the imitation was intended for. Such parodies of foreign wines—whether their basis be rhubarb, or cider, or currants, or grapes themselves, no matter—are utterly execrable: the object sought should be to obtain a pure product of the highest perfection of which it is capable; to call it by its own name; to add in this way whatever we can that is healthful, either to the delicacies or the medicinal resources of the household—but not to ape foreign productions, which when they reach us, nine times out of ten, are so adulterated that we are imitating what is at best only a poor imitation, if not an actually pernicious counterfeit.

☞ We have heretofore referred to the Shows of Seed Grain annually held by some of the Local Agricultural Societies in Great Britain. As an example of the interest and competition they excite, we may state that the East Lothian (Scotland) Agricultural Society held such an exhibition Oct. 9th, at which "210 quarters" or 1680 bushels of seed wheat of various kinds were shown. As the prizes go for the best lots of 10 quarters, this would show 21 competitors. First prizes were awarded on the best samples of Hunter's wheat, Hopetoun wheat, Fenton wheat, and, under the head of "any other white variety," to a quantity of "Shirreff's Bearded," which weighed 66½ lbs. per bushel. Such shows afford an example that should be followed in our wheat districts rather more in earnest than was the case at Rochester in September last.

☞ Mr. E. N. BISSELL, Shoreham, Vt., has bought eighteen yearling ewes from the admirable flock of Silesian Merinos of WM. CHAMBERLAIN, Esq., near Barrytown, Dutchess Co., and forty-two ewes and one ram lamb from the "Infantado" flocks of Messrs. STEPHEN ATWOOD and his two sons, Woodbury, Conn. These are very choice sheep, and will add greatly to the value of the excellent flock already in the hands of Mr. B.

In a note on page 128 of Mr. RANDALL'S "Practical Shepherd," to which Mr. BISSELL calls our attention, it is stated that Mr. Stephen Atwood sold a Ram in 1844, at the Poughkeepsie State Fair, to Judge M. W. C. Wright of Shoreham, for the purpose of crossing the "Infantado" upon the "Paular" and other sheep. Mr. B. has shown us Mr. Atwood's certificate, that the ram referred to was in fact purchased by his father, SALMON L. BISSELL, instead of by Judge Wright.

THE POTATO PLOW.—There are several different plows used for throwing potatoes out of the ground, manufactured in this country; but all the valuable ones that we have met with, are copied in principle from the English implement, consisting of parallel iron rods, running backwards from the share, so as to sift the earth and throw the potatoes to the surface as it passes. We have used one of these plows for several years, and find it a valuable labor-saving implement. It throws the potatoes to the surface of the earth, from which they are readily picked up by hand. Two men, with one of these plows will dig about as many potatoes in a day as six men working with hoes, after the old-fashioned manner. It is important, but not essential, that the soil should be free from any weeds.

WORKING HEIFERS.—John Carruth of West Waterville Me., writes the Boston Cultivator that a neighbor of his has a pair of two-year old heifers which are broken to the yoke and work kindly. The girth of the largest is six feet three, and she weighs 1,110 pounds.

ANGORA GOATS.—Winthrop W. Chenery of the "Highland Stock Farm," Belmont, Me., has just received an importation of 27 Angora goats from Asia Minor, in fine condition, after a voyage of fifty-one days.

Inquiries and Answers.

THE PRACTICAL SHEPHERD.—I noticed in the Co. GENT. of Oct. 29, that a work on Breeding, Management and Diseases of Sheep, by HENRY S. RANDALL, L. L. D., has just been published. Will you oblige me by informing me where it can be obtained? J. E. W. *Hatfield, Mass.* [We believe it is sold by agents only; the publisher declines to supply us with copies for sale, and we are therefore obliged to return all orders for it that we receive. Other inquirers on the subject will accept this as an answer to their questions also.]

PLANTING MAPLE SEED.—I wish to know through your valuable paper, when is the proper time to plant white or soft maple seed. Will they grow if planted in fall or spring? Also elm seed—will same time of planting do? I have some gathered for planting this fall or next spring. Any information on these two questions will be thankfully received. THOS. BELL. *Elizabeth, Ill.* [Maple seed may be mixed with leaf mold in autumn, and planted half an inch deep early in spring. The seed of the elm ripening earlier, may be planted as soon as ripe, in fine, friable earth, taking care to keep the surface moist until the young plants are well rooted.]

SULPHITE OF LIME.—Please republish the recipe for using sulphite of lime in making cider. I have it, I think, in some of my back numbers, but cannot find it in many diligent searches. A SUBSCRIBER. *Brooks Station, Ky.* [The process was thus described by a correspondent of the COUNTRY GENTLEMAN in 1860: "After the apple juice or grape juice have fermented until they have acquired the best taste, but before much vinegar is formed, add the sulphite of lime in the proportion of ¼ ounce to the gallon. The fermentation is instantly checked, and the cider, being now undisturbed by its own fermentative commotions, in a few weeks settles, becoming finer than any glue, or isinglass, or milk can make it, by any number of rackings. There may be a little flavor of the sulphur at first, but that I suppose must pass off before ong, as I find it gradually diminishes."]

BOOKS.—Will you please inform me what is the best work on grape culture, and where it can be obtained, with price, &c, also what are the best works on general farming, with their prices? A. HANLEY. *Apple Grove, Polk Co., Iowa.* [Phin's "Open Air Grape Culture" will probably suit you as well as any other work, price $1.25. Allen's "American Farm Book," is the best cheap work on general farming—price, $1 25. The "American Farmer's Encyclopedia," is a much larger and a good work, price $5. We can send you these books, postpaid, at the prices named.]

ROTATION AND CLOVER.—You would oblige me very much by giving me a little advice relative to dividing my farm, with a view to a regular rotation. Next spring I propose taking possession of a farm of 120 acres, in Sussex County, Delaware. For the last five years the farm has been worked in true Delaware manner. The rotation has been corn, oats and wheat, until the land became too poor for the latter crop, which has been dropped; the rotation being continued with the remaining crops. The last season having been (to use their expression) a very late one, the farmer could not get in his oat crop, but in its place corn was substituted; the consequence is nearly the whole farm is planted in corn this year. I intend to divide the farm into six fields of 20 acres each, one for corn, another for oats, and another I expect to plow up and sow with clover seed and plaster, which will occupy 60 acres, leaving a balance of 60 acres for future consideration. The land being a light sandy loam do you think the cultivator would work the land sufficiently for clover seed? Any remarks or advice you would be pleased to give, gentlemen, would be thankfully received. A SUBSCRIBER TO C. G. [Our correspondent can judge best whether the cultivator alone will reduce the land to a fine, mellow condition. If there are some weeds already upon it, it would probably be best to turn the whole surface under with the plow, which should be done before winter. The soil having been somewhat exhausted, a dressing of manure will be almost indispensable for the corn, and would be of great use to the oats. A rotation which succeeds well on strong, fertile soil, consists of corn, oats, wheat, and clover for two or three years, but in this instance the oats would probably be too exhausting and barley would be rather better, and peas still better, for the intermediate crop; but the more frequently the clover comes in the course, and especially if turned under heavily, the more rapidly the soil will become enriched.]

DWARF APPLES.—Please to let me know whether dwarf apple trees are an imposition on the public or not, as I heard one of our nurserymen say so the other day; and as I have planted dwarfs, I hope I have not been imposed on; but however, they are growing well; and I have two apples this year, the second from planting. They are the King of Tompkins County, and are a very fine apple. J. C. *Guelph.* [If our correspondents would read more attentively what we have published within a year or two on this and other subjects they would be less at loss for correct information. Dwarf apples are not a humbug, if propagated on the right stocks, and well taken care of subsequently. We have many trees now growing on our grounds in a fine, thrifty condition, some of them bearing one or two bushels annually. The nurseryman alluded to probably either has not tried them, or else has been unsuccessful from improper stocks or mismanagement.]

HEELING-IN TREES.—Will you please tell me how to heel in trees, taken up this fall, so as best to preserve them for planting in the spring? H. L. [In reply, we give the following from our ANN. REGISTER for 1864: "In heeling them

Fig. 1.

in, select a dry, clean, mellow piece of ground, with no grass near to invite mice; dig a wide trench, lay in the roots, sloping (fig. 1,) and cover them and half the stems with fine mellow earth; fill in carefully and solid all the interstices among the roots; doing this work imperfectly often results in loss—if well performed, it never can. If much danger is feared from mice, it is better to place the trees erect in the trench (fig. 2,) and round up the whole surface about them; but being more exposed in this position, they should be placed in a more sheltered situation from the winds.

Fig. 2.

BONE DUST.—Can you give me any information as to bone dust (crude) used as a top-dressing on meadow land, clay loam, well drained, both by nature and tiles. How many pounds per acre is the most effective. J. L. A. *Barrytown, N. Y.* [Bone dust has not been so extensively used in different portions of this country, on different soils, and in varying circumstances, as to authorize a confident opinion as to the certain result of untried experiments. It is usual to apply about half a ton per acre, and there is no doubt it would exert, in a greater or less degree, a beneficial influence, particularly on pasture lands.]

PRUNING THE BLACKBERRY.—On the culture of the Blackberry I can find no directions for removing old wood or spring pruning, and you will oblige, perhaps others as well as myself, by an answer. J. B. S. *Saugerties, Oct.* 30. [The best way is to cut out the old and useless stems in

summer immediately after bearing; this allows the new stem better room to grow. If not done then, the work may be performed early in spring. It is perhaps best not to do it just before winter, as the old stems afford a little shelter against cold winds.]

COVERING STRAWBERRY PLANTS.—Are leaves from the woods a fit covering for strawberry plants this winter—would'nt they be apt to blow away—if not, would'nt they be a great bother next spring while cultivating the plants? Can't pay $10 for straw. F. L. C. [Leaves are a good covering for strawberry beds, to be placed between the plants, but not heavily over them, as they may smother. They will not blow away unless in places more exposed than strawberries should be planted—after the first rain the leaves will lie flat, and not easily moved by wind. In any rare case, they might be covered with sticks or pea-brush. They may be plowed or spaded under in the spring, or if in a thick layer, raked off.]

MANURE-SHEDS AND MUCK.—Will you or some of your numerous subscribers, inform me through THE CULTIVATOR, the best way to construct manure-sheds, and if it makes any odds whether "muck" is applied wet or dry? E. C. K. [The cheapest manure-sheds may be made by procuring first a suitable number of long posts, of locust or some other durable wood. As twelve feet boards are of the most convenient length for making the shed, set a row of tall posts firmly in the ground for the centre or peak of the shed, and nearly or about twelve feet apart. These posts should extend upward twelve or fourteen feet from the ground. Then place a row on each side for the eaves, nearly or about ten feet from the central row, and the same distance asunder as the others. All that is now necessary is to put on the roof. Form the ridge or peak by nailing boards on each side of the tall posts at the top, forming straight, continuous, horizontal strips. Strong boards, a foot wide, should be selected for this purpose, as they may sometimes have to sustain a heavy weight of snow. Form the plates by nailing similar boards to the tops of the lower posts. The roof is completed by placing boards from the peak to the plates in the usual manner. If necessary to exclude winds, one or two sides may be boarded up on the posts. Any desired length may be given to the shed, according to circumstances. Any farmer can build this shed himself; a more finished structure may be made by a carpenter. Muck should be as dry as possible when used, when it will absorb several times its weight of liquid manure. If wet, it will absorb little or none, and its value as an absorbent be thus lost.]

THE LOMBARD AND OTHER PLUMS.—Having read your remarks upon the Lombard plum in the Oct. No. of THE CULTIVATOR, I wish to inquire whether it is less troubled by curculio than the German prune? A year since I received the German prune from Ellwanger & Barry, but find by reference to the books, that there are two varieties which go by this name, viz., the Domine Dull and the old Quetche plum. Can you tell me which I probably have, and which is freest from curculio? A SUBSCRIBER. [The Lombard plum is more liable to the attacks of the curculio than the German prune, the latter often escaping when other sorts are totally destroyed. The German prune or Quetche and Domine Dull are distinct varieties, although the latter is often called by the name of the German prune. The Domine Dull is less elongated, and with less distinct suture, and is perhaps rather more liable to the attacks of the curculio than the German prune.]

HORSE RADISH.—We some time since received an inquiry, which has been mislaid, about preparing horse radish for winter use. Our market gardeners take up the roots before the ground freezes, and bury them in sand in a box or a corner of the cellar, where they will not freeze, from whence they are taken and grated as wanted for use.

BARN-YARDS.—Answer to A. J. S., p. 304.—I had a barn-yard that I could not keep dry enough for cattle. I covered it a foot deep or over with stone, then put about ten inches of earth over the stone, and put some 40 head of cattle in occasionally before the foddering season, (after a shower is best), and they trod the clay hard over the stone. It has been a dry yard ever since, and it must be near 20 years since I so laid it. Before that, in open winter, my cattle got sore feet and swollen limbs, but never since I fixed the yard in that way. JOHN JOHNSTON.

BOOKS FOR THE FARM AND GARDEN. — Most of our readers are aware that LUTHER TUCKER & SON of Albany, publish a neat and most acceptable annual in paper covers, called the REGISTER OF RURAL AFFAIRS. This cheap and unpretending pamphlet, costing only twenty-five cents, is crowded with serviceable hints on all branches of rural economy and taste. Its contents are mainly original, being prepared by JOHN J. THOMAS, a standard authority in farming and fruit culture; while from their successive numbers a beautiful triennial volume is compiled, known simply as RURAL AFFAIRS. Of these volumes three have appeared, including the nine years from 1855 to 1864, each distinct from its fellows, yet forming together a rare compendium of facts and suggestions on all that pertains to country life. The subjects treated embrace the whole range of farming, fruit, flower and kitchen gardens, building cottages and laying out grounds, the care and management of domestic animals, and whatever conduces to the landholder's profit, comfort luxury and taste. These volumes are full of variety and interest, and embellished with more than four hundred engravings each. They are cheap enough to come within the means of all, and we know of no works better calculated to aid in raising actual farm life to something like its beautiful ideal. The same publishers issue the COUNTRY GENTLEMAN, a weekly periodical, equal in ability and identical in aim, from whose full columns the monthly CULTIVATOR is compiled; so that this single office, in its weekly, monthly, annual and triennal issues, sends forth countless agencies of elevation and refinement, aiding both the material and moral wilderness "to blossom as the rose."—*Springfield Republican.*

[For the Country Gentleman and Cultivator.]

HOW TO IMPROVE WET BARN-YARDS.

EDS. CO. GENTLEMAN—Your correspondent A. J. S., inquires how to drain and make dry a low barn-yard, or in other words, would like the experience of those that have had trouble with low and wet barn-yards. I have just completed an arrangement that bids fair to pay me well for all trouble and cost, and works well so far.

I make box drains out of two inch plank—size of inside 6 by 10 inches—close up the upper end with plank two inches thick; make quite a number of auger holes in the sides and ends of said drain, fill in the ends and sides next to the auger holes with a quantity of small cobble stones, so that the surface water can settle through and pass off freely by the aid of the box drain. I cover it over with a small quantity of straw, then with earth. I find such arrangements give me a dry and nice yard. Having eave troughs to your barns and sheds will help the matter very much.

I would also add that one place much traveled over, was so mirey that I had to lay down a lot of old planks or boards to make a foundation to build upon, leaving the drains even with the plank so laid down, and cover over the plank with cobble-stones and earth. That part is now as firm as any part of my yard. H. W. W.

Flint, Mich., Nov. 7, 1863.

LOSS OF HORSES.—During the past year the government has lost 11,000 horses by battle and disease. The average number daily received at the veterinary hospitals at Washington alone was over 100, of which not more than one-half are returned for duty. It was claimed that a large proportion of this mortality might be saved by the employment of regularly trained veterinary surgeons in the army.

THE ADIRONDAC GRAPE took the Premium at the great Grape Exhibition recently held in New-York, as the

BEST NATIVE GRAPE,

"QUALITY to rule," over all others, the celebrated Delaware included. It ripens one week before the Hartford Prolific, and two weeks before the Delaware, and is more than double the size of the latter.

Vines for sale by single one, dozen or hundred. Every plant warranted genuine. Circulars sent free. Address,

Oct. 22—w&m1t. J. W. CONE, Norfolk, Conn.

NEW PHILADELPHIA RASPBERRY.—After the 10th of 10th month (October) we shall have ready for sale and shipment, genuine, well rooted plants of the above, by the dozen or hundred.

From its great hardiness, extraordinary productiveness and fine flavor, it promises to be the leading Raspberry for market or private gardeners. Price, $2.50 per dozen, $15 per 100.

PASCHALL MORRIS,
Agricultural and Seed Warehouse,
Oct. 1—w&mtf. 1,120 Market-St., Philadelphia.

VENTRILOQUISM.

Full and complete instructions in VENTRILOQUISM, together with all the advertised

CHANCES FOR MAKING MONEY,

Sent on receipt of Fifty Cents. Address H. G. WISE.
Nov. 19—w5tm1t. Fleming, Cayuga Co., N. Y.

A NEW WORK,

Entitled DEBILITY AND ITS CAUSES. Price $1. Will be sent to clergymen and medical men FREE OF CHARGE on receipt of 25 cents to pay return postage. Address G C. WESLEY,
Nov. 19—w&m1t. Box 232, Windsor, Vt.

SHORT-HORN BULL FOR SALE.

HOTSPUR, 4030 A. H. B., rich roan: calved May 15, 1860; got by Duke of Gloster, (11382,) dam imported cow Daphne by Harold, (10299,) see E. H. B., vol. xi. p. 548.

Hotspur was winner of FIRST PRIZE as a yearling, and sweepstakes as best bull of any age, at Watertown, in 1861. SECOND PRIZE at Rochester, 1862, and FIRST PRIZE at Utica, 1863. He is a sure getter, and very gentle. Price, $1,000. Apply to

T. L. HARISON,
Nov. 19—w3tm1t. Morley, St. Lawrence Co., N. Y.

COTSWOLD SHEEP.

ASH GROVE, NEW PRESTON, CT.,
October 15, 1863.

MESSRS. L. TUCKER & SON:

I have this day sold to BURDETT LOOMIS of WINDSOR LOCKS, Hartford Co., Conn., my entire flock of COTSWOLD SHEEP, bred directly from my own importations—the get of imported "Cedric," out of imported ewes. The sale comprises all the ewes bred directly from the importation of 1857. This places Mr. LOOMIS in possession of the

BEST FLOCK OF COTSWOLDS IN THE UNITED STATES!

and I can in all confidence recommend all who wish to purchase FIRST CLASS COTSWOLDS to examine Mr. Loomis' Flock before purchasing elsewhere. Yours truly,

Oct. 29—w&m1t. GEORGE C. HITCHCOCK.

FOR SALE.—One superior Alderney Bull, 2 years old past, a sure stock getter and winner of the Second Premium at the last New-York State Fair. Price, $100.

Also two pure bred BERKSHIRE BOARS, very fine and large, one four and the other five months old. Price, $15 each. Full pedigrees furnished of the above stock. Address

THOMAS GOULD,
Oct. 1—w3tm2t. Aurora, Cayuga Lake, N. Y.

BERKSHIRE SWINE.—Including one Boar, 1 year old, and one Sow 18 months old. For sale by

WM. J. PETTEE,
Oct. 29—w3tm1t. Lakeville, Conn.

PURE BRED LOP EARED

MADAGASCAR RABBITS.

The undersigned having increased his pure stock of the above breed, is now prepared to execute orders, which will be delivered in Philadelphia, carefully boxed ready for shipment. Address

FRANCIS MORRIS,
Sept. 10—w&mtf. Box 1652, Philadelphia Post-Office.

PREMIUM CHESTER COUNTY WHITES.—

THOMAS WOOD

Penningtonville, Chester Co., Pa.,

Continues to ship to any part of the Union these celebrated HOGS in pairs not akin, at reasonable terms. April 16—w&mly.

1864 THE ILLUSTRATED 1864

ANNUAL

REGISTER OF RURAL AFFAIRS.

NO. X---FOR 1864.

One Hundred and Thirty Engravings!

The Tenth Number of the ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS is now in press, and will be issued without farther delay.

Its contents embrace, as usual, a large variety—including Agriculture and Rural Economy at large, Horticulture, The Dairy, Domestic Economy, etc.

It is illustrated by nearly ONE HUNDRED AND THIRTY ENGRAVINGS, of which the larger part are from drawings especially prepared for the present Number.

Beside the usual Calendar pages, presenting calculations for the three different parallels of the New-England, the Middle and the Border States, the following synopsis will partially show the chief subjects treated and the ground covered in the "ANNUAL REGISTER for 1864."

I. FARM DUTIES PERFORMED IN SEASON—FIFTY-SIX ENGRAVINGS.
II.—ROAD MAKING—TEN ENGRAVINGS.
III.—MANAGEMENT OF SWINE—FIVE ENGRAVINGS.
IV.—MECHANICAL CONTRIVANCES.—TWENTY-TWO ENGRAVINGS.
V.—DAIRY FARMING AND CHEESE MAKING—SIX ENGRAVINGS.
VI.—COLLECTING AND PRESERVING INSECTS—NINE ENGRAVINGS.
VII.—FRUIT CULTURE—THREE ENGRAVINGS
VIII.—DOMESTIC ECONOMY—SIX ENGRAVINGS.
IX.—RURAL ECONOMY.
X.—THE POULTRY-YARD—EIGHT ENGRAVINGS.

It will be observed that the Leading Article in the present number of the ANNUAL REGISTER is intended to follow the Farm Labors of the year throughout their round, suggesting the several points particularly requiring attention from month to month. It will be found well worth the price of the Number to every careful reader. In future issues, the various subjects of Gardening, Fruit Raising, &c., will probably be treated in a similar way.

The subject of Cheese Making and the CHEESE FACTORIES is now one of especial interest. The article referring to it is the result of a personal examination of the leading Factories, and presents a full and concise statement of all the details of manufacture, as well as the organization of the factories. It is the most complete account of them yet before the public.

The article on the collection and preservation of Entomological specimens, will be of great interest to students in this important branch of Science.

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But at these rates, owing to the increased cost of paper, composition, &c., we can no longer pay the postage (Two Cents per copy) ourselves, as heretofore; and where copies are ordered by mail, the POSTAGE MUST BE ADDED therefore to the prices given above.

For still larger quantities for sale by agents, favorable terms will be given. ALL ORDERS to be accompanied by CASH.

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LUTHER TUCKER & SON,
ALBANY, N. Y.

*** COMPLETE SETS OF THE ANNUAL REGISTER—Ten years—paper covered, comprising about TWELVE HUNDRED PAGES of Reading Matter and nearly FIFTEEN HUNDRED ENGRAVINGS, will be sent by mail postpaid for $2: previous numbers are also sent separately at 25 cents each, or any five of them for $1. Complete sets of the Nine Numbers previous to 1864, bound in Three handsome Volumes, on larger, heavier and finer paper, are also for sale, at $1.25 each, or $3.75 for the three postpaid—sold together or separately, as may be desired.

THE FARMER'S LIBRARY

We know of no works which afford so much Practical Information on the subject of American Agriculture, which can be procured for double the cost, as the Third Series of "THE CULTIVATOR," the 10th vol. of which is now completed. The price of the Ten volumes, handsomely bound in muslin, is 75 cents each at this office, or $1.00 each sent by mail, post paid. Either volume from 1 to 10, can be had separately at the same price. The Ten volumes will be sent per Express to any part of the country, on receipt of $7 50.

AMERICAN WEEDS AND USEFUL PLANTS—Being a 2d and Illustrated edition of Agricultural Botany: an enumeration and description of useful plants and weeds, which merit the notice or require the attention of American agriculturists. By Wm. Darlington, M. D. Every Farmer or Farmer's Son who wishes to know the names and character of the plants growing on his farm should study this book. For sale at the office of the Co. Gent. and Cultivator L. TUCKER & SON.

LARGE FARM FOR SALE—Consisting of 800 acres, 4 miles south of Perrysburg and 12 miles from Toledo. It embraces prairie and timber land. One hundred and sixty acres are under improvement and other portions are partially improved. The soil is very rich, and with a moderate outlay it may be made one of the most productive farms of its size in Ohio, the soil being specially adapted to the growth of Tobacco, Flax and other products requiring a soil of extraordinary fertility. The surrounding country is considerably improved. A good dirt road passes straight from Perrysburg, through the farm, adjoining which are two school houses. Perrysburg being on the navigable waters of Lake Erie, affords a good market for farming products, and good society. The Dayton and Michigan Railroad has a station within 2 miles of the land, from which a half hour by rail will take the passenger to Toledo. Being well adapted to grass, it would make a productive stock farm. If desired by the purchaser, 640 acres, embracing an entire section, and most of the prairie, and all of the improvements, would be sold by itself. Terms $5,000 on giving possession, and balance on long time, if desired, at 6 per cent. The whole tract would be sold at $15 per acre, or the section by itself at $18 per acre.

SCOTT & ROSS, Real Estate Agents,
Oct. 22–w&mtf. 132 Summit-St., Toledo, Ohio.

RURAL ADVERTISER,
OF EIGHT QUARTO PAGES,
A MONTHLY PUBLICATION, DEVOTED TO
AGRICULTURE, HORTICULTURE,
AND RURAL ECONOMY.

At 25 Cents per annum, payable in advance. Published by
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RALPH'S PATENT IMPROVED
"ONEIDA CHEESE VAT."

Was awarded the FIRST PREMIUM by competent judges, after a thorough test of merit, at the New-York State Fair 1862. It is the most simple, durable and effective cheese making apparatus in use. Is used in dairies of 10 to 1,000 cows. The only vat well adapted to "factory" cheese-making. More economical in use than steam, and much less expensive in cost.

We have on hand, ready for delivery, all sizes, varying from 84 to 600 gallons.

Circulars containing description, size and price list, and directions or using, sent on application to

WILLIAM RALPH, } WM. RALPH & Co.,
JOHN CARTON, } 133 Genesee-St., Utica, N Y.,

Manufacturers and dealers—wholesale and retail—in Dairyman's Tools and Implements. Feb. 12–w&m1yr.

PREPARE FOR THE HOLIDAYS!

Booksellers, Fancy Goods Dealers, and the public will please remember that there is no other GIFT which compares with the CRAIG MICROSCOPE and MOUNTED OBJECTS, being an endless source of amusement and instruction. Over 200 dozen Microscopes and 700 dozen objects have been sold within a year by the Boston Agent alone. This Microscope, in brass, is mailed, postage paid, for $2.25; or with six beautiful mounted objects for $3; or with 24 objects for $5. In hard rubber, for 50 cents in addition to the above prices. A liberal discount to the trade. Address HENRY CRAIG,
Nov. 5–w&m5mos. 335 Broadway, New York.

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NEAR THE CORNER OF
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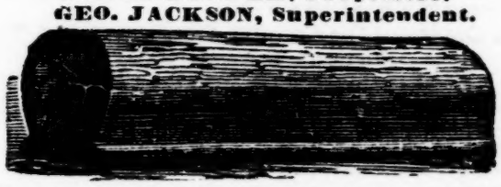

The subscriber is prepared to furnish Round, Sole and Horse-Shoe Tile, over 13 inches in length, by the cargo, or in the smallest quantity on demand, at prices that he will defy any other parties to undersell him. He will warrant his tile hard burnt, and to fit close at the joints, and altogether superior to any made in the United States.

All tile delivered on board of cars and boats in this city free of charge. Price list sent on application.

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Also DRAINING TILE MACHINES for sale of the latest improved Patterns. For further particulars address as above. Ap. 9–w&m

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FICKARDT'S CATTLE POWDER
HATH ACHIEVED!

THOUSANDS ARE TESTIFYING TO ITS EFFICACY.

"*The Merciful Man is Kind to his Beast.*"

AFTER years of study and experiment by the Inventor, to compound from PURE VEGETABLE MATERIALS a Powder that SHOULD and MUST take the place of the thousand and one nostrums gotten up and palmed upon the public as "CERTAIN REMEDIES" for the cure of all diseases which the brute creation are "heir to," he has produced the one heading this advertisement, and none CAN BE GENUINE unless bearing our FAC SIMILE signature. The demand has been such that its sale has been chiefly confined to the State of Pennsylvania, but we have now consummated such arrangements that we are prepared to supply the numerous orders now on hand, as well as those we may hereafter receive from other States of the Union.

Knowing this powder to possess all the curative properties here set forth, we deem a fulsome tirade of words unnecessary, feeling assured that its OWN MERITS will secure for it a ready sale. Being composed of pure vegetable ingredients, it can be safely and judiciously given to that noble animal the HORSE. Its effects are no FALSE PAMPERING of the system, creating a bloated carcass with a premature shedding of the hair; but on the other hand, it strengthens the digestion, purifies the blood, regulates the urinary organs, thereby improving and protecting the whole PHYSICAL condition of the animal even when in an apparently healthy state.

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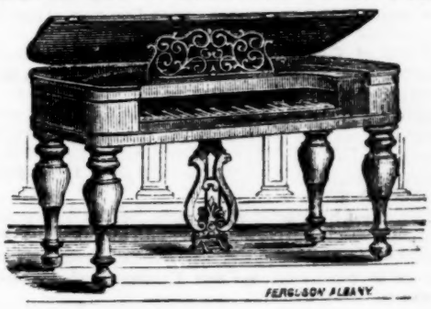

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